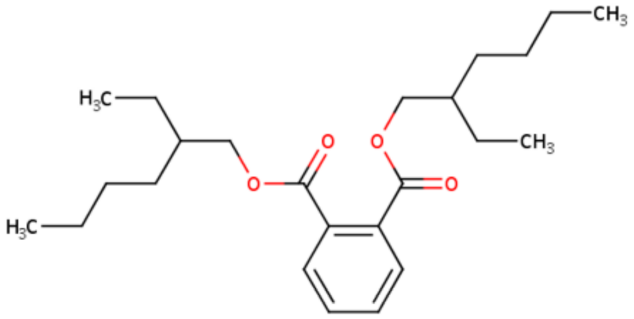
United States
Environmental Protection Agency

May 2025
Office of Chemical Safety and
Pollution Prevention

Data Extraction Information for Environmental Hazard and Human Health Hazard Animal Toxicology and Epidemiology for Diethylhexyl Phthalate (DEHP) (1,2-Benzenedicarboxylic acid, 1,2-bis(2-ethylhexyl) ester)

Systematic Review Support Document for the Draft Risk Evaluation

CASRN: 117-81-7



May 2025

This supplemental file contains information regarding the data extraction results relevant to the *Draft Environmental Hazard Assessment for Diethylhexyl Phthalate (DEHP)* and the *Draft Human Health Hazard Assessment for Diethylhexyl Phthalate (DEHP)*. EPA used the TSCA systematic review process described in the *Draft Systematic Review Protocol Supporting TSCA Risk Evaluations for Chemical Substances* (also referred to as the '2021 Draft Systematic Review Protocol'). Any updated steps in the systematic review process for data extraction since the publication of the 2021 Draft Systematic Review Protocol are described in the *Draft Risk Evaluation for Diethylhexyl Phthalate (DEHP) – Systematic Review Protocol*. EPA conducted data extraction based on author-reported descriptions and results; additional analyses (*e.g.*, statistical analyses performed during data integration into the risk evaluation) potentially conducted by EPA are not contained in this supplemental file.

Environmental Hazard Data Extraction: As explained in Section 6.4 of the 2021 Draft Systematic Review Protocol, key study details (*e.g.*, exposure duration vs. study duration) were extracted from references that underwent data quality evaluation; these study details are available in the tables below. The study details and respective endpoints were organized by first the chemical, then relevant habitat (*i.e.*, aquatic vs. terrestrial), followed by taxa categories (*e.g.*, vertebrates, invertebrates, vegetation), taxonomic groups (*e.g.*, fish, amphibian, mammalian, avian, worms, vascular plants), individual species, and finally exposure duration.

All the references that underwent data quality evaluation using the environmental hazard data quality metrics were extracted regardless of metric ranking and are included in this supplemental file. In the environmental hazard data extraction table, for some studies there were hazard health outcomes with multiple health effect levels extracted from ECOTOX; if all the data for one same health outcome were the same except for the health effect level (*e.g.*, LOEL level), multiple data extraction rows were combined into a single row in the table. All the extracted environmental hazard data will also be available in the ECOTOXicology Knowledgebase (ECOTOX) database; moreover, additional data sources and experimental details for these studies will also be available in ECOTOX.

Data Extraction of Rodent Data for the Application of Environmental Hazard: For DEHP, toxicity data gaps were identified for mammalian wildlife relevant to the terrestrial compartment of the environmental hazard assessment. This table includes rodent data for DEHP, which were used as proxy for mammalian wildlife. The rodent data were evaluated following the human health hazard animal toxicity evaluation and extraction process; however, additional data for health outcomes most relevant for environmental hazard assessment were extracted and are listed here.

Human Health Hazard Animal Toxicity Extraction: This supplemental file contains data extraction information for references that underwent data quality evaluation. Listed references with data extractions (1) met PECO screening criteria, (2) were published prior to 2014 which was the preferred literature cutoff date by EPA for data reported in previous assessments, and (3) reported human equivalent dose (HED) derived from points of departure (POD) that contained lowest-observable-effect levels (LOEL) greater than an order of magnitude of the lowest HED lowest-observable-adverse-effect level (LOAEL) identified across existing assessments. For a detailed description on these three criteria, see the *Draft Risk Evaluation for Diethylhexyl Phthalate (DEHP) – Systematic Review Protocol*. Data from references that were within an order of magnitude of the existing assessment HED were extracted and detailed data were extracted from each individual health outcome within each organ/system. Any co-critical effects were reported along with OQD for the health outcome. A detailed summary statement of each study is reported along with the major limitations as identified by the reviewer and any guidelines used.

Epidemiological Study Information Extraction: All epidemiology references that met PECO screening criteria and further filtering criteria and had an overall quality determination of High, Medium, or Low were extracted as detailed in Section 6.4 of the 2021 Draft Systematic Review Protocol and the *Draft Risk Evaluation for Diethylhexyl Phthalate (DEHP) – Systematic Review Protocol*. The data extracted include the measured health effect or endpoint, a description of the study population, the specific exposure compound measured and summary levels of exposure, the method of exposure measurement, and a summary of the results. Each health outcome assessed in a reference is extracted separately, and as such, each reference may have more than one record in the data extraction tables, with each record categorized by health outcome.

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673565 Andrade, A. J., Grande, S. W., Talsness, C. E., Gericke, C., Grote, K., Golombiewski, A., Sterner-Kock, A., Chahoud, I. (2006). A dose response study following in utero and lactational exposure to di-(2-ethylhexyl) phthalate (DEHP): Reproductive effects on adult male offspring rats. Toxicology 228(1):85-97. **655**

673567 Andrade, A. J., Grande, S. W., Talsness, C. E., Grote, K., Golombiewski, A., Sterner-Kock, A., Chahoud, I. (2006). A dose-response study following in utero and lactational exposure to di-(2-ethylhexyl) phthalate (DEHP): Effects on androgenic status, developmental landmarks and testicular histology in male offspring rats. Toxicology 225(1):64-74. **658**

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Human Health Hazard Epidemiology **688**

Diethylhexyl Phthalate

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7502437 Wang, C. W., Chen, S. C., Wu, D. W., Chen, H. C., Lin, H. H., Su, H., Shiea, J. T., Lin, W. Y., Hung, C. H., Kuo, C. H. (2021). Effect of dermal phthalate levels on lung function tests in residential area near a petrochemical complex. Environmental Science and Pollution Research 28(21):27333-27344. **688**

Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP); Mono-(2-ethyl-5-carboxypentyl)phthalate (MECPP)

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Aquatic: Fish Extraction Table

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117-81-7	7 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (100 ug/L)	Development/Growth	High	2966358
117-81-7	7 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Biochemical (Hormone(s)-11-Ketotestosterone, Response Site: Plasma)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	7 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Plasma)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	7 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Biochemical (Hormone(s)-17beta-Estradiol:11-Ketotestosterone ratio, Response Site: Plasma)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	7 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Gonad(s))	NOEC (100 ug/L)	Reproductive/Teratogenic	High	2966358
117-81-7	7 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (100 ug/L)	Development/Growth	High	2966358

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117-81-7	7 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-kiss-1 metastasis suppressor mRNA, Response Site: Brain)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	7 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-Vitellogenin A mRNA, Response Site: Liver)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	7 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-Steroidogenic Acute Regulatory protein mRNA, Response Site: Testes)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	7 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-Luteinizing hormone receptor mRNA, Response Site: Testes)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	7 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-Estrogen receptor alpha mRNA, Response Site: Liver)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358

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117-81-7	7 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-CYP19b mRNA, Response Site: Brain)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	7 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-Androgen receptor mRNA, Response Site: Testes)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	7 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-Androgen receptor mRNA, Response Site: Brain)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	7 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Biochemical (Hormone(s)-Luteinizing hormone, Response Site: Plasma)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	7 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-Gonadotrophin-releasing hormone receptor 3 mRNA, Response Site: Brain)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358

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117-81-7	7 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-G-protein coupled receptor 54 mRNA, Response Site: Brain)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	15 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-Estrogen receptor alpha mRNA, Response Site: Liver)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	15 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-Androgen receptor mRNA, Response Site: Testes)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	15 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Biochemical (Hormone(s)-11-Ketotestosterone, Response Site: Plasma)	LOEC (10 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358

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117-81-7	15 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Plasma)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	15 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Biochemical (Hormone(s)-17beta-Estradiol:11-Ketotestosterone ratio, Response Site: Plasma)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
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117-81-7	15 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Biochemical (Hormone(s)-Luteinizing hormone, Response Site: Plasma)	LOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
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117-81-7	15 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (100 ug/L)	Development/Growth	High	2966358
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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	15 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-G-protein coupled receptor 54 mRNA, Response Site: Brain)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	15 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-Steroidogenic Acute Regulatory protein mRNA, Response Site: Testes)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	15 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-Luteinizing hormone receptor mRNA, Response Site: Testes)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	15 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-Gonadotrophin-releasing hormone receptor 3 mRNA, Response Site: Brain)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	15 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-CYP19b mRNA, Response Site: Brain)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	30 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-Steroidogenic Acute Regulatory protein mRNA, Response Site: Testes)	LOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	30 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-G-protein coupled receptor 54 mRNA, Response Site: Brain)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	30 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-Luteinizing hormone receptor mRNA, Response Site: Testes)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	30 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Biochemical (Hormone(s)-11-Ketotestosterone, Response Site: Plasma)	LOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	30 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Gonad(s))	NOEC (100 ug/L)	Reproductive/Teratogenic	High	2966358

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	30 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-CYP19b mRNA, Response Site: Brain)	NR (1-100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	30 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-Gonadotrophin-releasing hormone receptor 3 mRNA, Response Site: Brain)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	30 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-kiss-1 metastasis suppressor mRNA, Response Site: Brain)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	30 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Reproduction (Reproduction-Weight, Response Site: Sperm)	LOEC (1 ug/L)	Reproductive/Teratogenic	High	2966358
117-81-7	30 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Biochemical (Hormone(s)-Luteinizing hormone, Response Site: Plasma)	NR (1-100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	30 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-Estrogen receptor alpha mRNA, Response Site: Liver)	NR (1-100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	30 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (100 ug/L)	Development/Growth	High	2966358
117-81-7	30 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (100 ug/L)	Development/Growth	High	2966358
117-81-7	30 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Liver)	NOEC (100 ug/L)	Development/Growth	High	2966358
117-81-7	30 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-Androgen receptor mRNA, Response Site: Brain)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	30 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Biochemical (Hormone(s)-17beta-Estradiol:11-Ketotestosterone ratio, Response Site: Plasma)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	30 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Plasma)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	30 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-Androgen receptor mRNA, Response Site: Testes)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	30 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-Vitellogenin A mRNA, Response Site: Liver)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	High	2966358
117-81-7	30.0001736 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Reproduction (Reproduction-Motility, Response Site: Sperm)	NOEC (10 ug/L)	Reproductive/Teratogenic	High	2966358
117-81-7	30.0001736 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Reproduction (Reproduction-Velocity, Response Site: Sperm)	LOEC (10 ug/L)	Reproductive/Teratogenic	High	2966358
117-81-7	30.0001736 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Reproduction (Reproduction-Motility, Response Site: Sperm)	LOEC (100 ug/L)	Reproductive/Teratogenic	High	2966358
117-81-7	30.0001736 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Reproduction (Reproduction-Velocity, Response Site: Sperm)	NOEC (1 ug/L)	Reproductive/Teratogenic	High	2966358
117-81-7	30.0003472 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Reproduction (Reproduction-Velocity, Response Site: Sperm)	NOEC (10 ug/L)	Reproductive/Teratogenic	High	2966358

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	30.0003472 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Reproduction (Reproduction-Velocity, Response Site: Sperm)	LOEC (100 ug/L)	Reproductive/Teratogenic	High	2966358
117-81-7	30.0003472 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Reproduction (Reproduction-Motility, Response Site: Sperm)	LOEC (100 ug/L)	Reproductive/Teratogenic	High	2966358
117-81-7	30.0003472 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Reproduction (Reproduction-Motility, Response Site: Sperm)	NOEC (10 ug/L)	Reproductive/Teratogenic	High	2966358
117-81-7	30.0005208 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Reproduction (Reproduction-Motility, Response Site: Sperm)	NOEC (10 ug/L)	Reproductive/Teratogenic	High	2966358
117-81-7	30.0005208 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Reproduction (Reproduction-Motility, Response Site: Sperm)	LOEC (100 ug/L)	Reproductive/Teratogenic	High	2966358
117-81-7	30.0005208 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Reproduction (Reproduction-Velocity, Response Site: Sperm)	NOEC (100 ug/L)	Reproductive/Teratogenic	High	2966358
117-81-7	30.000694 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Reproduction (Reproduction-Velocity, Response Site: Sperm)	NOEC (100 ug/L)	Reproductive/Teratogenic	High	2966358
117-81-7	30.000694 Day(s), (30.000694 Day(s))	*Carassius auratus* (Goldfish), Mature, 2-3 Year(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Reproduction (Reproduction-Motility, Response Site: Sperm)	LOEC (1 ug/L)	Reproductive/Teratogenic	High	2966358

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Citrate, Response Site: Liver)	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Alanine, Response Site: Liver)	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Adenosine triphosphate, Response Site: Liver)	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Fumarate, Response Site: Liver)	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Adenosine monophosphate (AMP), Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Tyrosine, Response Site: Liver)	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Adenosine diphosphate (ADP), Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Adenosine triphosphate, Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Acetoacetate, Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Acetate, Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-alpha-Aminoisobutyrate, Response Site: Liver)	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Acetate, Response Site: Liver)	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Adenosine diphosphate (ADP), Response Site: Liver)	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Acetoacetate, Response Site: Liver)	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Alanine, Response Site: Gonad(s))	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Asparagine, Response Site: Gonad(s))	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Aspartate, Response Site: Gonad(s))	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Aspartate, Response Site: Liver)	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Choline, Response Site: Gonad(s))	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Citrate, Response Site: Gonad(s))	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-3-aminoisobutyrate, Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-sn-Glycero-3-phosphocholine, Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Adenosine monophosphate (AMP), Response Site: Liver)	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Glycine,Glucose,Glutathione, total,Isoleucine,Niacinamide,Propanedioic acid,Taurine,Trimethylamine oxide, Response Site: Gonad(s),Liver)	NR (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Creatine, Response Site: Gonad(s))	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-sn-Glycero-3-phosphocholine, Response Site: Liver)	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-3-aminoisobutyrate, Response Site: Liver)	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Tryptophan, Response Site: Liver)	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Leucine, Response Site: Liver)	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Formate, Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Formate, Response Site: Liver)	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Fumarate, Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-alpha-Aminoisobutyrate, Response Site: Gonad(s))	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Glutamate, Response Site: Liver)	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Glutamine, Response Site: Liver)	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Inosine, Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Uridine diphosphate glucose, Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Inosine, Response Site: Liver)	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Valine, Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Valine, Response Site: Liver)	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Pimethylhistidine, Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Phosphocholine, Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Phenylalanine, Response Site: Liver)	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Maltose, Response Site: Liver)	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Maltose, Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Malonate, Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Lactate, Response Site: Liver)	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Tyrosine, Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Uridine diphosphate glucose, Response Site: Liver)	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Creatinine, Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Glutamate, Response Site: Gonad(s))	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Sarcosine, Response Site: Liver)	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Phosphocholine, Response Site: Liver)	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Phenylalanine, Response Site: Gonad(s))	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Malonate, Response Site: Liver)	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Lactate, Response Site: Gonad(s))	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Glutamine, Response Site: Gonad(s))	LOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Asparagine, Response Site: Liver)	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Choline, Response Site: Liver)	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Creatine, Response Site: Liver)	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Threonine, Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Pimethylhistidine, Response Site: Liver)	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Tryptophan, Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Creatinine, Response Site: Liver)	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Proline, Response Site: Liver)	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Sarcosine, Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Succinate, Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Succinate, Response Site: Liver)	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Threonine, Response Site: Liver)	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Proline, Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	10 Day(s), (10 Day(s))	*Carassius auratus* (Goldfish), Not reported, Male, Laboratory (AQUATIC IMPORTS, CALGARY, CANADA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 2050 ng/L	Biochemical (Biochemistry-Leucine, Response Site: Gonad(s))	NOEC (2050 ng/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Liver toxicology; Reproductive/Teratogenic; Nutritional and Metabolic	Medium	1249842
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-CYP19A1 mRNA, Response Site: Liver)	NOEC (200 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both (Measured in: Male organisms), Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Peroxisome proliferator-activated receptor alpha a mRNA, Response Site: Liver)	NR (10-400 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Estrogen receptor alpha mRNA, Response Site: Liver)	NOEC (400 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Liver)	NOEC (400 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Growth (Growth-Condition index, Response Site: Whole organism)	NOEC (400 ug/L)	Development/Growth	High	4829324
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (400 ug/L)	Development/Growth	High	4829324
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (400 ug/L)	Development/Growth	High	4829324
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-CYP19A1 mRNA, Response Site: Liver)	LOEC (400 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-CYP19A1 mRNA, Response Site: Liver)	LOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	7 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both (Measured in: Male organisms), Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Peroxisome proliferator-activated receptor alpha a mRNA, Response Site: Liver)	NR (10-400 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	7 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (400 ug/L)	Development/Growth	High	4829324

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Estrogen receptor alpha mRNA, Response Site: Liver)	NOEC (200 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	7 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Estrogen receptor alpha mRNA, Response Site: Liver)	LOEC (400 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	7 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Liver)	LOEC (10 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	7 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Growth (Growth-Condition index, Response Site: Whole organism)	NOEC (400 ug/L)	Development/Growth	High	4829324

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117-81-7	7 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (400 ug/L)	Development/Growth	High	4829324
117-81-7	7 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-CYP19A1 mRNA, Response Site: Liver)	NOEC (10 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both (Measured in: Male organisms), Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Biochemical (Biochemistry-Peroxisome proliferator-activated receptor, Response Site: Liver)	LOEC (10 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both (Measured in: Female organisms), Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Liver)	LOEC (10 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both (Measured in: Female organisms), Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-CYP19A1 mRNA, Response Site: Liver)	LOEC (10 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both (Measured in: Male organisms), Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-CYP19A1 mRNA, Response Site: Liver)	LOEC (10 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both (Measured in: Female organisms), Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Peroxisome proliferator-activated receptor alpha a mRNA, Response Site: Liver)	LOEC (10 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both (Measured in: Female organisms), Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Liver)	LOEC (10 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-CYP19A1 mRNA, Response Site: Liver)	LOEC (400 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Estrogen receptor alpha mRNA, Response Site: Liver)	LOEC (400 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both (Measured in: Female organisms), Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Biochemical (Biochemistry-Peroxisome proliferator-activated receptor, Response Site: Liver)	LOEC (10 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both (Measured in: Female organisms), Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Biochemical (Hormone(s)-Testosterone, Response Site: Liver)	NOEC (400 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Liver)	LOEC (400 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-CYP19A1 mRNA, Response Site: Liver)	NOEC (200 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both (Measured in: Female organisms), Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Estrogen receptor alpha mRNA, Response Site: Liver)	NOEC (200 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Estrogen receptor alpha mRNA, Response Site: Liver)	NOEC (200 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both (Measured in: Male organisms), Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Liver)	NOEC (200 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Liver)	NOEC (200 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both (Measured in: Male organisms), Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Liver)	NOEC (400 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Accumulation (Accumulation-Residue, Response Site: Liver)	NR (10-400 ug/L)	ADME (biotransformation)	Uninformative	4829324
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both (Measured in: Male organisms), Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Liver)	LOEC (400 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both (Measured in: Female organisms), Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Estrogen receptor alpha mRNA, Response Site: Liver)	LOEC (400 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Growth (Growth-Condition index, Response Site: Whole organism)	NOEC (400 ug/L)	Development/Growth	High	4829324
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both (Measured in: Male organisms), Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Estrogen receptor alpha mRNA, Response Site: Liver)	NOEC (400 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (400 ug/L)	Development/Growth	High	4829324
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (400 ug/L)	Development/Growth	High	4829324
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Biochemical (Enzyme(s)-Aromatase, Response Site: Liver)	NR (10-400 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both (Measured in: Male organisms), Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Biochemical (Hormone(s)-Testosterone, Response Site: Liver)	NR (10-400 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both (Measured in: Male organisms), Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Peroxisome proliferator-activated receptor alpha a mRNA, Response Site: Liver)	NR (10-400 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both, Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Histology-Degeneration,Inflammation,Vacuolization, Response Site: Gonad(s))	NR (10-400 ug/L)	Reproductive/Teratogenic	High	4829324

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Juvenile, 4 Week(s), Both (Measured in: Male organisms), Laboratory (DEPARTMENT OF AQUACULTURE, UNIVERSITY OF IBADAN, NIGERIA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Peroxisome proliferator-activated receptor alpha a mRNA, Response Site: Liver)	NOEC (400 ug/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	4829324
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Cytochrome P450 c17 alpha hydroxylase/17,20 lyase mRNA, Response Site: Head kidney (pronephros))	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-CYP19A1 mRNA, Response Site: Brain)	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-P450scc mRNA, Response Site: Head kidney (pronephros))	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Steroidogenic Acute Regulatory protein mRNA, Response Site: Brain)	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-17 beta-hydroxysteroid dehydrogenase mRNA, Response Site: Head kidney (pronephros))	NOEC (400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-17 beta-hydroxysteroid dehydrogenase mRNA, Response Site: Brain)	NOEC (400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-CYP17 mRNA, Response Site: Head kidney (pronephros))	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Cytochrome P450 c17 alpha hydroxylase/17,20 lyase mRNA, Response Site: Brain)	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Steroidogenic Acute Regulatory protein mRNA, Response Site: Head kidney (pronephros))	NOEC (400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-CYP11beta mRNA, Response Site: Brain)	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-20 beta-Hydroxysteroid dehydrogenase mRNA, Response Site: Head kidney (pronephros))	LOEC (10 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-CYP11beta mRNA, Response Site: Head kidney (pronephros))	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-CYP17 mRNA, Response Site: Brain)	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-20 beta-Hydroxysteroid dehydrogenase mRNA, Response Site: Brain)	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-3B-Hydroxysteroid dehydrogenase mRNA, Response Site: Brain)	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-3B-Hydroxysteroid dehydrogenase mRNA, Response Site: Head kidney (pronephros))	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	3 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-P450scc mRNA, Response Site: Brain)	LOEC (10 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Cytochrome P450 c17 alpha hydroxylase/17,20 lyase mRNA, Response Site: Head kidney (pronephros))	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	7 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-CYP11beta mRNA, Response Site: Head kidney (pronephros))	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	7 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Cytochrome P450 c17 alpha hydroxylase/17,20 lyase mRNA, Response Site: Brain)	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
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117-81-7	7 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-3B-Hydroxysteroid dehydrogenase mRNA, Response Site: Brain)	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	7 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-P450scc mRNA, Response Site: Head kidney (pronephros))	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
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117-81-7	7 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-20 beta-Hydroxysteroid dehydrogenase mRNA, Response Site: Brain)	LOEC (10 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	7 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-CYP19A1 mRNA, Response Site: Brain)	NOEC (400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
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117-81-7	7 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-17 beta-hydroxysteroid dehydrogenase mRNA, Response Site: Brain)	NOEC (400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	7 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-CYP11beta mRNA, Response Site: Brain)	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
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117-81-7	7 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-20 beta-Hydroxysteroid dehydrogenase mRNA, Response Site: Head kidney (pronephros))	LOEC (10 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	7 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Steroidogenic Acute Regulatory protein mRNA, Response Site: Head kidney (pronephros))	LOEC (400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
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117-81-7	7 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-P450scc mRNA, Response Site: Brain)	LOEC (10 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	7 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Steroidogenic Acute Regulatory protein mRNA, Response Site: Brain)	NOEC (400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Steroidogenic Acute Regulatory protein mRNA, Response Site: Head kidney (pronephros))	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-17 beta-hydroxysteroid dehydrogenase mRNA, Response Site: Brain)	NOEC (400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Biochemical (Hormone(s)-Testosterone, Response Site: Liver)	LOEC (200 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023

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117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Biochemical (Hormone(s)-Testosterone, Response Site: Liver)	NOEC (100 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-17 beta-hydroxysteroid dehydrogenase mRNA, Response Site: Head kidney (pronephros))	NOEC (400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Liver)	NOEC (200 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023

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Aquatic: Fish Extraction Table

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117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-CYP19A1 mRNA, Response Site: Brain)	NOEC (400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-CYP17 mRNA, Response Site: Head kidney (pronephros))	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
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117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Steroidogenic Acute Regulatory protein mRNA, Response Site: Brain)	NOEC (400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Not reported	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Biochemical (Biochemistry-Protein content, Response Site: Liver)	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-20 beta-Hydroxysteroid dehydrogenase mRNA, Response Site: Brain)	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-3B-Hydroxysteroid dehydrogenase mRNA, Response Site: Brain)	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-3B-Hydroxysteroid dehydrogenase mRNA, Response Site: Head kidney (pronephros))	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-CYP11beta mRNA, Response Site: Brain)	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-CYP11beta mRNA, Response Site: Head kidney (pronephros))	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-CYP17 mRNA, Response Site: Brain)	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Cytochrome P450 c17 alpha hydroxylase/17,20 lyase mRNA, Response Site: Brain)	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-Cytochrome P450 c17 alpha hydroxylase/17,20 lyase mRNA, Response Site: Head kidney (pronephros))	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-P450scc mRNA, Response Site: Head kidney (pronephros))	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-P450scc mRNA, Response Site: Brain)	NR (10-400 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	14 Day(s), (14 Day(s))	*Clarias gariepinus* (Zambezi Barbel), Fingerling, 6 Week(s), Not Reported, Laboratory (OBTAINED FROM THE HATCHERY UNIT OF AQUACULTURE DEPARTMENT, UNIVERSITY OF IBADAN.)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10 ug/L / 100 ug/L / 200 ug/L / 400 ug/L	Cellular (Genetics-20 beta-Hydroxysteroid dehydrogenase mRNA, Response Site: Head kidney (pronephros))	LOEC (10 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity; Neurotoxicology	High	5494023
117-81-7	96 Hour(s), (96 Hour(s))	*Cyprinodon variegatus* (Sheepshead Minnow), Juvenile, Not Reported, Not reported (NR)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.17 mg/L)	Mortality	High	1321996

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (96 Hour(s))	*Cyprinodon variegatus* (Sheepshead Minnow), Juvenile, <=10 Week(s), Not Reported, Laboratory (EITHER CULTURED AT LAB OR PURCHASED FROM A PROVEN HATCHERY IN MASSACHUSETTS)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.0015-0.01 ppm / 0.10 (0.02-0.19) ppm / 0.17 (0.04-0.31) ppm	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.17 ppm)	Mortality	High	1316224
117-81-7	48 Hour(s), (96 Hour(s))	*Cyprinodon variegatus* (Sheepshead Minnow), Juvenile, <=10 Week(s), Not Reported, Laboratory (EITHER CULTURED AT LAB OR PURCHASED FROM A PROVEN HATCHERY IN MASSACHUSETTS)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.0015-0.01 ppm / 0.10 (0.02-0.19) ppm / 0.17 (0.04-0.31) ppm	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.17 ppm)	Mortality	High	1316224
117-81-7	72 Hour(s), (96 Hour(s))	*Cyprinodon variegatus* (Sheepshead Minnow), Juvenile, <=10 Week(s), Not Reported, Laboratory (EITHER CULTURED AT LAB OR PURCHASED FROM A PROVEN HATCHERY IN MASSACHUSETTS)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.0015-0.01 ppm / 0.10 (0.02-0.19) ppm / 0.17 (0.04-0.31) ppm	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.17 ppm)	Mortality	High	1316224

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	96 Hour(s), (96 Hour(s))	*Cyprinodon variegatus* (Sheepshead Minnow), Juvenile, <=10 Week(s), Not Reported, Laboratory (EITHER CULTURED AT LAB OR PURCHASED FROM A PROVEN HATCHERY IN MASSACHUSETTS)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.0015-0.01 ppm / 0.10 (0.02-0.19) ppm / 0.17 (0.04-0.31) ppm	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (0.17 (0.04-0.31) ppm)	Mortality	High	1316224
117-81-7	96 Hour(s), (96 Hour(s))	*Cyprinodon variegatus* (Sheepshead Minnow), Juvenile, <=10 Week(s), Not Reported, Laboratory (EITHER CULTURED AT LAB OR PURCHASED FROM A PROVEN HATCHERY IN MASSACHUSETTS)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.0015-0.01 ppm / 0.10 (0.02-0.19) ppm / 0.17 (0.04-0.31) ppm	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (0.17 ppm)	Mortality	High	1316224

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (96 Hour(s))	*Cyprinodon variegatus* (Sheepshead Minnow), Juvenile, 14-28 Days post-hatch, Not Reported, Laboratory (FROM EG AND G BIONOMICS RESEARCH LABORATORY OR EPA ENVIRONMENTAL RESEARCH LABORATORY, GULF BREEZE, FLORIDA)	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>550 mg/L)	Mortality	Medium	18110
117-81-7	48 Hour(s), (96 Hour(s))	*Cyprinodon variegatus* (Sheepshead Minnow), Juvenile, 14-28 Days post-hatch, Not Reported, Laboratory (FROM EG AND G BIONOMICS RESEARCH LABORATORY OR EPA ENVIRONMENTAL RESEARCH LABORATORY, GULF BREEZE, FLORIDA)	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>550 mg/L)	Mortality	Medium	18110

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	72 Hour(s), (96 Hour(s))	*Cyprinodon variegatus* (Sheepshead Minnow), Juvenile, 14-28 Days post-hatch, Not Reported, Laboratory (FROM EG AND G BIONOMICS RESEARCH LABORATORY OR EPA ENVIRONMENTAL RESEARCH LABORATORY, GULF BREEZE, FLORIDA)	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>550 mg/L)	Mortality	Medium	18110
117-81-7	96 Hour(s), (96 Hour(s))	*Cyprinodon variegatus* (Sheepshead Minnow), Juvenile, 14-28 Days post-hatch, Not Reported, Laboratory (FROM EG AND G BIONOMICS RESEARCH LABORATORY OR EPA ENVIRONMENTAL RESEARCH LABORATORY, GULF BREEZE, FLORIDA)	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>550 mg/L)	Mortality	Medium	18110

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117-81-7	96 Hour(s), (96 Hour(s))	*Cyprinodon variegatus* (Sheepshead Minnow), Juvenile, 14-28 Days post-hatch, Not Reported, Laboratory (FROM EG AND G BIONOMICS RESEARCH LABORATORY OR EPA ENVIRONMENTAL RESEARCH LABORATORY, GULF BREEZE, FLORIDA)	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (550 mg/L)	Mortality	Medium	18110
117-81-7	24 Hour(s), (24 Hour(s))	*Cyprinodon variegatus* (Sheepshead Minnow), Not reported, Not Reported, Wild (GALVESTON BAY, GALVESTON, TEXAS)	Salt water, Aqueous (aquatic habitat), Static, 1 Organism	Chemical analysis reported	100 ppb / 500 ppb	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BAF (100 ppb)	ADME (biotransformation)	Uninformative	789995
117-81-7	24 Hour(s), (24 Hour(s))	*Cyprinodon variegatus* (Sheepshead Minnow), Not reported, Not Reported, Wild (GALVESTON BAY, GALVESTON, TEXAS)	Salt water, Aqueous (aquatic habitat), Static, 1 Organism	Chemical analysis reported	100 ppb / 500 ppb	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BAF (500 ppb)	ADME (biotransformation)	Uninformative	789995

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3-12 Hour(s), (12 Hour(s))	*Cyprinus carpio* (Common Carp), Oocyte, ova, Not Reported, Laboratory (FROM A LOCAL AQUATIC MARKET IN XIAMEN, CHINA)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0.1 umol/L / 1 umol/L / 5 umol/L	Cellular (Genetics-18S Ribosomal RNA mRNA,28S ribosomal RNA mRNA,beta-Actin mRNA,Cathepsin L mRNA,Elongation factor 1-alpha 1 mRNA,Glyceraldehyde 3-phosphate dehydrogenase (GAPDH) mRNA, Response Site: Oocyte)	NR (0.1-5 umol/L)	Mechanistic: Reproductive/Teratogenic	Medium	5554274
117-81-7	1 Day(s), (9 Day(s))	*Cyprinus carpio* (Common Carp), Not reported, Not Reported, Laboratory (FANGTA MARKET, SONGJIANG DISTRICT, SHANGHAI, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, 10 Organism	Unmeasured	0 mg/L / 3.80 mg/L / 7.59 mg/L / 18.98 mg/L	Biochemical (Enzyme(s)-Xanthine oxidase, XOD, Response Site: Liver)	LOEC (3.80 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2510817
117-81-7	96 Hour(s), (96 Hour(s))	*Cyprinus carpio* (Common Carp), Not reported, Not Reported, Laboratory (FANGTA MARKET, SONGJIANG DISTRICT, SHANGHAI, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	NR / NR / NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (37.95 (37.87-38.03) mg/L)	Mortality	Medium	2510817

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	9 Day(s), (9 Day(s))	*Cyprinus carpio* (Common Carp), Not reported, Not Reported, Laboratory (FANGTA MARKET, SONGJIANG DISTRICT, SHANGHAI, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 1.8975 mg/L / 3.80 mg/L / 9.4875 mg/L	Biochemical (Enzyme(s)-Xanthine oxidase, XOD, Response Site: Liver)	NR (1.8975-9.4875 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2510817
117-81-7	9 Day(s), (9 Day(s))	*Cyprinus carpio* (Common Carp), Not reported, Not Reported, Laboratory (FANGTA MARKET, SONGJIANG DISTRICT, SHANGHAI, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, 10 Organism	Unmeasured	0 mg/L / 3.80 mg/L / 7.59 mg/L / 18.98 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Liver)	LOEC (3.80 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2510817
117-81-7	1-9 Day(s), (9 Day(s))	*Cyprinus carpio* (Common Carp), Not reported, Not Reported, Laboratory (FANGTA MARKET, SONGJIANG DISTRICT, SHANGHAI, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 3.80 mg/L / 7.59 mg/L / 18.98 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Liver)	NR (3.80-18.98 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2510817
117-81-7	9 Day(s), (9 Day(s))	*Cyprinus carpio* (Common Carp), Not reported, Not Reported, Laboratory (FANGTA MARKET, SONGJIANG DISTRICT, SHANGHAI, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 1.8975 mg/L / 3.80 mg/L / 9.4875 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Liver)	NR (1.8975-9.4875 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2510817

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117-81-7	9 Day(s), (9 Day(s))	*Cyprinus carpio* (Common Carp), Not reported, Not Reported, Laboratory (FANGTA MARKET, SONGJIANG DISTRICT, SHANGHAI, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 1.8975 mg/L / 3.80 mg/L / 9.4875 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Liver)	NR (1.8975-9.4875 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2510817
117-81-7	1 Week(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (4.0 mg/kg diet)	Development/Growth	High	5043619
117-81-7	2 Week(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (4.0 mg/kg diet)	Development/Growth	High	5043619
117-81-7	3 Week(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (4.0 mg/kg diet)	Development/Growth	High	5043619
117-81-7	4 Week(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (4.0 mg/kg diet)	Development/Growth	High	5043619

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	5 Week(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (4.0 mg/kg diet)	Development/Growth	High	5043619
117-81-7	6 Week(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (4.0 mg/kg diet)	Development/Growth	High	5043619
117-81-7	7 Week(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (4.0 mg/kg diet)	Development/Growth	High	5043619
117-81-7	8 Week(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (4.0 mg/kg diet)	Development/Growth	High	5043619
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-Si:ch211-213il6 mRNA, Response Site: Gastrointestinal tract)	LOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-Si:ch211-11p18 mRNA, Response Site: Gastrointestinal tract)	LOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-Regulator of calcineurin 1 mRNA, Response Site: Gastrointestinal tract)	LOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-Phospholipase A2 mRNA, Response Site: Gastrointestinal tract)	LOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-Peroxisome proliferator-activated receptor alpha mRNA, Response Site: Gastrointestinal tract)	LOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-Nuclear receptor subfamily 0, group B, member 2b mRNA, Response Site: Gastrointestinal tract)	LOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-Guanylate binding protein 1 mRNA, Response Site: Gastrointestinal tract)	LOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-ABC transporter C family member 2 mRNA, Response Site: Gastrointestinal tract)	LOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-Solute carrier family 15 member 1 mRNA, Response Site: Gastrointestinal tract)	NOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-Si:ch211-226h7 mRNA, Response Site: Gastrointestinal tract)	LOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-Cholecystokinin mRNA, Response Site: Gastrointestinal tract)	NOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-Ghrelin mRNA, Response Site: Gastrointestinal tract)	NOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-Leptin mRNA, Response Site: Gastrointestinal tract)	NOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-Lipoprotein lipase mRNA, Response Site: Liver)	NOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-Peroxisome proliferator-activated receptor beta mRNA, Response Site: Gastrointestinal tract)	NOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-Peroxisome proliferator-activated receptor gamma mRNA, Response Site: Gastrointestinal tract)	NOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-Proopiomelanocortin mRNA, Response Site: Gastrointestinal tract)	NOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-Guanylate cyclase 2g mRNA, Response Site: Gastrointestinal tract)	LOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-T-complex 11, testis-specific-like 2 mRNA, Response Site: Gastrointestinal tract)	LOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-Peroxisome proliferator-activated receptor gamma mRNA, Response Site: Liver)	LOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (4.0 mg/kg diet)	Development/Growth	High	5043619

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Gonad(s))	LOEC (4.0 mg/kg diet)	Development/Growth	High	5043619
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Liver)	LOEC (4.0 mg/kg diet)	Development/Growth	High	5043619
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-Solute carrier family 15 member 2 mRNA, Response Site: Gastrointestinal tract)	NOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-Sterol regulatory element binding protein 1 mRNA, Response Site: Liver)	NOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Growth (Growth-Length to weight ratio, Response Site: Whole organism)	LOEC (4.0 mg/kg diet)	Development/Growth	High	5043619

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	60 Day(s), (60 Day(s))	*Danio rerio* (Zebra Danio), Adult, 8 Month(s), Both, Laboratory (UNIVERSITY OF FLORIDA ANIMAL CARE SERVICES)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	0 mg/kg diet / 4.0 mg/kg diet	Cellular (Genetics-CCAAT/enhancer binding protein alpha mRNA, Response Site: Liver)	NOEC (4.0 mg/kg diet)	Mechanistic: Cell signaling/function	High	5043619
117-81-7	72 Hour(s), (72 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, 4-128 Cell stage, Not Reported, Laboratory (PURCHASED FROM THE ZEBRAFISH INTERNATIONAL RESOURCE CENTER (ZIRC) AT THE UNIVERSITY OF OREGON, EUGENE, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.01 ppm / 0.06 ppm / 0.30 ppm / 0.60 ppm / 1.50 ppm / 10.00 ppm / 50.00 ppm / 100.00 ppm / 500.00 ppm	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (0.01-500.00 ppm)	Mortality	Medium	2298079
117-81-7	1 Week(s), (3 Week(s))	*Danio rerio* (Zebra Danio), Adult, 6 Month(s), Male, Laboratory (ACQUARIO DI BOLOGNA, ITALY)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 0.2 ug/L / 20 ug/L	Cellular (Histology-Cyst, Response Site: Spermatid)	NOEC (20 ug/L)	Reproductive/Teratogenic	Medium	2000753
117-81-7	1 Week(s), (3 Week(s))	*Danio rerio* (Zebra Danio), Adult, 6 Month(s), Male, Laboratory (ACQUARIO DI BOLOGNA, ITALY)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 0.2 ug/L / 20 ug/L	Cellular (Genetics-Damage, Response Site: Testes)	NOEC (20 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair); Reproductive/Teratogenic	Medium	2000753

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	1 Week(s), (3 Week(s))	*Danio rerio* (Zebra Danio), Adult, 6 Month(s), Male, Laboratory (ACQUARIO DI BOLOGNA, ITALY)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 0.2 ug/L / 20 ug/L	Cellular (Histology-Cyst, Response Site: Sperm)	NOEC (20 ug/L)	Reproductive/Teratogenic	Medium	2000753
117-81-7	1 Week(s), (3 Week(s))	*Danio rerio* (Zebra Danio), Adult, 6 Month(s), Male, Laboratory (ACQUARIO DI BOLOGNA, ITALY)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 0.2 ug/L / 20 ug/L	Cellular (Histology-Cyst, Response Site: Spermatocyte)	NOEC (20 ug/L)	Reproductive/Teratogenic	Medium	2000753
117-81-7	3 Week(s), (3 Week(s))	*Danio rerio* (Zebra Danio), Adult, 6 Month(s), Male, Laboratory (ACQUARIO DI BOLOGNA, ITALY)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 0.2 ug/L / 20 ug/L	Cellular (Histology-Cyst, Response Site: Sperm)	LOEC (20 ug/L)	Reproductive/Teratogenic	Medium	2000753
117-81-7	3 Week(s), (3 Week(s))	*Danio rerio* (Zebra Danio), Adult, 6 Month(s), Male, Laboratory (ACQUARIO DI BOLOGNA, ITALY)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 0.2 ug/L / 20 ug/L	Reproduction (Reproduction-Hatch, Response Site: Not reported)	LOEC (0.2 ug/L)	Reproductive/Teratogenic	Medium	2000753
117-81-7	3 Week(s), (3 Week(s))	*Danio rerio* (Zebra Danio), Adult, 6 Month(s), Male, Laboratory (ACQUARIO DI BOLOGNA, ITALY)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 0.2 ug/L / 20 ug/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	LOEC (0.2 ug/L)	Reproductive/Teratogenic	Medium	2000753
117-81-7	3 Week(s), (3 Week(s))	*Danio rerio* (Zebra Danio), Adult, 6 Month(s), Male, Laboratory (ACQUARIO DI BOLOGNA, ITALY)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 0.2 ug/L / 20 ug/L	Cellular (Histology-Cyst, Response Site: Spermatid)	NOEC (0.2 ug/L)	Reproductive/Teratogenic	Medium	2000753

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Week(s), (3 Week(s))	*Danio rerio* (Zebra Danio), Adult, 6 Month(s), Male, Laboratory (ACQUARIO DI BOLOGNA, ITALY)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 0.2 ug/L / 20 ug/L	Cellular (Histology-Cyst, Response Site: Spermatocyte)	LOEC (0.2 ug/L)	Reproductive/Teratogenic	Medium	2000753
117-81-7	3 Week(s), (3 Week(s))	*Danio rerio* (Zebra Danio), Adult, 6 Month(s), Male, Laboratory (ACQUARIO DI BOLOGNA, ITALY)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 0.2 ug/L / 20 ug/L	Cellular (Histology-Cyst, Response Site: Sperm)	LOEC (0.2 ug/L)	Reproductive/Teratogenic	Medium	2000753
117-81-7	3 Week(s), (3 Week(s))	*Danio rerio* (Zebra Danio), Adult, 6 Month(s), Male, Laboratory (ACQUARIO DI BOLOGNA, ITALY)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 0.2 ug/L / 20 ug/L	Cellular (Genetics-Damage, Response Site: Testes)	LOEC (0.2 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair); Reproductive/Teratogenic	Medium	2000753
117-81-7	3 Week(s), (3 Week(s))	*Danio rerio* (Zebra Danio), Adult, 6 Month(s), Male, Laboratory (ACQUARIO DI BOLOGNA, ITALY)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 0.2 ug/L / 20 ug/L	Cellular (Histology-Cyst, Response Site: Spermatid)	NR (0.2-20 ug/L)	Reproductive/Teratogenic	Medium	2000753
117-81-7	3 Week(s), (3 Week(s))	*Danio rerio* (Zebra Danio), Adult, 6 Month(s), Male, Laboratory (ACQUARIO DI BOLOGNA, ITALY)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 0.2 ug/L / 20 ug/L	Cellular (Histology-Cyst, Response Site: Spermatocyte)	NR (0.2-20 ug/L)	Reproductive/Teratogenic	Medium	2000753
117-81-7	3 Week(s), (3 Week(s))	*Danio rerio* (Zebra Danio), Adult, 6 Month(s), Male, Laboratory (ACQUARIO DI BOLOGNA, ITALY)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 0.2 ug/L / 20 ug/L	Cellular (Histology-Cyst, Response Site: Sperm)	NOEC (0.2 ug/L)	Reproductive/Teratogenic	Medium	2000753

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Week(s), (3 Week(s))	*Danio rerio* (Zebra Danio), Adult, 6 Month(s), Male, Laboratory (ACQUARIO DI BOLOGNA, ITALY)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 0.2 ug/L / 20 ug/L	Cellular (Histology-Cyst, Response Site: Spermatid)	LOEC (20 ug/L)	Reproductive/Teratogenic	Medium	2000753
117-81-7	3 Week(s), (3 Week(s))	*Danio rerio* (Zebra Danio), Adult, 6 Month(s), Male, Laboratory (ACQUARIO DI BOLOGNA, ITALY)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 0.2 ug/L / 20 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Testes)	LOEC (0.2 ug/L)	Reproductive/Teratogenic	Medium	2000753
117-81-7	21 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Length, Response Site: Tail)	LOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	21 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Length, Response Site: Yolk sac)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	21 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Width, Response Site: Head)	LOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	21 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Length, Response Site: Yolk)	LOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	21 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Depth, Response Site: Yolk sac)	NOEC (5.2 nM)	Development/Growth	High	3350278

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	21 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Width, Response Site: Yolk sac)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	21 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Depth, Response Site: Eye)	LOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	21 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Depth, Response Site: Head)	LOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	21 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Growth (Growth-Length, Response Site: Whole organism)	LOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	45 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Depth, Response Site: Head)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	45 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Depth, Response Site: Pericardium)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	45 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Width, Response Site: Yolk sac)	NOEC (5.2 nM)	Development/Growth	High	3350278

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	45 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Length, Response Site: Pericardium)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	45 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Length, Response Site: Tail)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	45 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Length, Response Site: Yolk sac)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	45 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Ratio, Response Site: Pericardium)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	45 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Width, Response Site: Head)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	45 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Growth (Growth-Length, Response Site: Whole organism)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	45 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Mortality (Mortality-Hatch, Response Site: Not reported)	NR (5.2 nM)	Mortality	Uninformative	3350278

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	45 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Depth, Response Site: Eye)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	45 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Length, Response Site: Yolk)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	45 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Depth, Response Site: Yolk sac)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	45 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Embryo	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Length, Response Site: Forebrain)	LOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	69 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization (Measured in: Larvae), Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Larvae	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Length, Response Site: Tail)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	69 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization (Measured in: Larvae), Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Larvae	Unmeasured	0 nM / 5.2 nM	Growth (Growth-Length, Response Site: Whole organism)	NOEC (5.2 nM)	Development/Growth	High	3350278

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	69 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization (Measured in: Larvae), Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Larvae	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Depth, Response Site: Pericardium)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	69 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization (Measured in: Larvae), Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Larvae	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Depth, Response Site: Head)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	69 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization (Measured in: Larvae), Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Larvae	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Depth, Response Site: Yolk sac)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	69 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization (Measured in: Larvae), Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Larvae	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Length, Response Site: Yolk)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	69 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization (Measured in: Larvae), Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Larvae	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Ratio, Response Site: Pericardium)	NOEC (5.2 nM)	Development/Growth	High	3350278

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	69 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization (Measured in: Larvae), Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Larvae	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Width, Response Site: Head)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	69 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization (Measured in: Larvae), Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Larvae	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Width, Response Site: Yolk sac)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	69 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization (Measured in: Larvae), Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Larvae	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Length, Response Site: Pericardium)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	69 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization (Measured in: Larvae), Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Larvae	Unmeasured	0 nM / 5.2 nM	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (5.2 nM)	Mortality	Uninformative	3350278
117-81-7	69 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization (Measured in: Larvae), Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Larvae	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Length, Response Site: Forebrain)	NOEC (5.2 nM)	Development/Growth	High	3350278

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	69 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization (Measured in: Larvae), Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Larvae	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Depth, Response Site: Eye)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	69 Hour(s), (69 Hour(s))	*Danio rerio* (Zebra Danio), Embryo, <=3 Hours post fertilization (Measured in: Larvae), Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Renewal, NA Larvae	Unmeasured	0 nM / 5.2 nM	Growth (Morphology-Length, Response Site: Yolk sac)	NOEC (5.2 nM)	Development/Growth	High	3350278
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Reproduction (Reproduction-Hatch, Response Site: Not reported)	NOEC (100 ug/L)	Reproductive/Teratogenic	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Cellular (Genetics-17 beta-hydroxysteroid dehydrogenase mRNA, Response Site: Testes)	NOEC (33 ug/L)	Mechanistic: Cell signaling/function; Epigenetics; Receptor binding/ regulation of receptor activity	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Cellular (Genetics-DNA methylation, Response Site: Testes)	LOEC (10 ug/L)	Mechanistic: Cell signaling/function; Epigenetics; Receptor binding/ regulation of receptor activity	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Cellular (Histology-Vacuolization, Response Site: Testes)	NR (100 ug/L)	Reproductive/Teratogenic	High	5497528

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Cellular (Cell(s)-Membrane Integrity,Organelle changes, Response Site: Mitochondria,Testes)	NR (100 ug/L)	Mechanistic: Cell signaling/function; Epigenetics; Receptor binding/ regulation of receptor activity	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Cellular (Genetics-DNA methylation, Response Site: Testes)	NR (10-100 ug/L)	Mechanistic: Cell signaling/function; Epigenetics; Receptor binding/ regulation of receptor activity	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Reproduction (Reproduction-Spermatid , Response Site: Testes)	NOEC (33 ug/L)	Reproductive/Teratogenic	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Cellular (Genetics-DNA methylation, Response Site: Testes)	NOEC (33 ug/L)	Mechanistic: Cell signaling/function; Epigenetics; Receptor binding/ regulation of receptor activity	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Reproduction (Reproduction-Fertility, Response Site: Not reported)	NOEC (33 ug/L)	Reproductive/Teratogenic	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Cellular (Genetics-17 beta-hydroxysteroid dehydrogenase mRNA, Response Site: Testes)	LOEC (100 ug/L)	Mechanistic: Cell signaling/function; Epigenetics; Receptor binding/ regulation of receptor activity	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Plasma)	LOEC (33 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	5497528

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s) (Measured in: F1 generation), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA F1 generation	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (100 ug/L)	Development/Growth	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (100 ug/L)	Mortality	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Reproduction (Reproduction-Spermatocytes, Response Site: Testes)	NOEC (33 ug/L)	Reproductive/Teratogenic	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Plasma)	NOEC (10 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s) (Measured in: F1 generation), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA F1 generation	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Cellular (Genetics-DNA methylation, Response Site: Testes)	NOEC (100 ug/L)	Mechanistic: Cell signaling/function; Epigenetics; Receptor binding/ regulation of receptor activity	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Cellular (Genetics-DNA methylation, Response Site: Testes)	LOEC (33 ug/L)	Mechanistic: Cell signaling/function; Epigenetics; Receptor binding/ regulation of receptor activity	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Reproduction (Reproduction-Fertility, Response Site: Not reported)	LOEC (100 ug/L)	Reproductive/Teratogenic	High	5497528

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	LOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Reproduction (Reproduction-Spermatid , Response Site: Testes)	LOEC (100 ug/L)	Reproductive/Teratogenic	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Cellular (Genetics-DNA methylation, Response Site: Testes)	LOEC (100 ug/L)	Mechanistic: Cell signaling/function; Epigenetics; Receptor binding/ regulation of receptor activity	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Reproduction (Reproduction-Spermatocytes, Response Site: Testes)	LOEC (100 ug/L)	Reproductive/Teratogenic	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEC (33 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s) (Measured in: F1 generation), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA F1 generation	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (100 ug/L)	Mortality	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Cellular (Genetics-CYP17 mRNA, Response Site: Testes)	LOEC (33 ug/L)	Mechanistic: Cell signaling/function; Epigenetics; Receptor binding/ regulation of receptor activity	High	5497528

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Cellular (Genetics-CYP19A1 mRNA, Response Site: Testes)	LOEC (33 ug/L)	Mechanistic: Cell signaling/function; Epigenetics; Receptor binding/ regulation of receptor activity	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Cellular (Genetics-CYP17 mRNA, Response Site: Testes)	NOEC (10 ug/L)	Mechanistic: Cell signaling/function; Epigenetics; Receptor binding/ regulation of receptor activity	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Cellular (Genetics-CYP19A1 mRNA, Response Site: Testes)	NOEC (10 ug/L)	Mechanistic: Cell signaling/function; Epigenetics; Receptor binding/ regulation of receptor activity	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Cellular (Genetics-DNA methylation, Response Site: Testes)	NOEC (10 ug/L)	Mechanistic: Cell signaling/function; Epigenetics; Receptor binding/ regulation of receptor activity	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Cellular (Genetics-DNA methylation, Response Site: Testes)	NOEC (100 ug/L)	Mechanistic: Cell signaling/function; Epigenetics; Receptor binding/ regulation of receptor activity	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEC (100 ug/L)	Reproductive/Teratogenic	High	5497528

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Reproduction (Reproduction-Spermatigonia, Response Site: Testes)	NOEC (100 ug/L)	Reproductive/Teratogenic	High	5497528
117-81-7	3 Month(s), (3 Month(s))	*Danio rerio* (Zebra Danio), Adult, 3 Month(s) (Measured in: F1 generation), Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, NA F1 generation	Unmeasured	0 ug/L / 10 ug/L / 33 ug/L / 100 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (33 ug/L)	Development/Growth	High	5497528
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (40.8 ug/L)	Development/Growth	High	3071151
117-81-7	6-7 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization (Measured in: F1 generation), Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA F1 generation	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Biochemical (Biochemistry-Protein content, Response Site: Not reported)	LOEC (13.3 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity	High	3071151
117-81-7	6-7 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEC (13.3 ug/L)	Reproductive/Teratogenic	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Plasma)	LOEC (4.2 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity	High	3071151

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Cellular (Genetics-CYP17 mRNA, Response Site: Gonad(s))	LOEC (4.2 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Cellular (Genetics-CYP19A mRNA, Response Site: Gonad(s))	LOEC (4.2 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Cellular (Genetics-CYP19b mRNA, Response Site: Brain)	LOEC (4.2 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Liver)	LOEC (4.2 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity	High	3071151
117-81-7	6-7 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization (Measured in: F1 generation), Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA F1 generation	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Biochemical (Biochemistry-Protein content, Response Site: Not reported)	NOEC (4.2 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	LOEC (40.8 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity	High	3071151

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Reproduction (Reproduction-Sperm cell counts, Response Site: Not reported)	LOEC (40.8 ug/L)	Reproductive/Teratogenic	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Reproduction (Reproduction-Spermatocytes, Response Site: Not reported)	LOEC (40.8 ug/L)	Reproductive/Teratogenic	High	3071151
117-81-7	6-7 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization (Measured in: F1 generation), Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA F1 generation	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (40.8 ug/L)	Development/Growth	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEC (13.3 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Gonad(s))	NOEC (13.3 ug/L)	Reproductive/Teratogenic	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Reproduction (Reproduction-Sperm cell counts, Response Site: Not reported)	NOEC (13.3 ug/L)	Reproductive/Teratogenic	High	3071151

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Reproduction (Reproduction-Spermatocytes, Response Site: Not reported)	NOEC (13.3 ug/L)	Reproductive/Teratogenic	High	3071151
117-81-7	6-7 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization (Measured in: F1 generation), Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA F1 generation	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (13.3 ug/L)	Development/Growth	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Biochemical (Hormone(s)-17beta-Estradiol:Testosterone ratio, Response Site: Plasma)	NOEC (4.2 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEC (4.2 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Cellular (Genetics-CYP17 mRNA, Response Site: Gonad(s))	NOEC (4.2 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Cellular (Genetics-CYP19A mRNA, Response Site: Gonad(s))	NOEC (4.2 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity	High	3071151

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Growth (Development-Stage, Response Site: Not reported)	LOEC (13.3 ug/L)	Development/Growth	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Gonad(s))	LOEC (40.8 ug/L)	Reproductive/Teratogenic	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Liver)	LOEC (13.3 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Cellular (Genetics-CYP17 mRNA, Response Site: Gonad(s))	LOEC (13.3 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Plasma)	NOEC (40.8 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Cellular (Genetics-CYP19b mRNA, Response Site: Brain)	NOEC (40.8 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity	High	3071151

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Growth (Development-Stage, Response Site: Not reported)	NOEC (40.8 ug/L)	Development/Growth	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Growth (Growth-Condition index, Response Site: Whole organism)	NOEC (40.8 ug/L)	Development/Growth	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Growth (Growth-Condition index, Response Site: Whole organism)	NOEC (40.8 ug/L)	Development/Growth	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (40.8 ug/L)	Development/Growth	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (40.8 ug/L)	Development/Growth	High	3071151
117-81-7	6-7 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization (Measured in: F1 generation), Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA F1 generation	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (40.8 ug/L)	Mortality	High	3071151

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117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Gonad(s))	NOEC (40.8 ug/L)	Reproductive/Teratogenic	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Liver)	NOEC (40.8 ug/L)	Hepatic/Liver	Uninformative	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Liver)	NOEC (40.8 ug/L)	Hepatic/Liver	Uninformative	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Reproduction (Reproduction-Spermatigonia, Response Site: Not reported)	NOEC (40.8 ug/L)	Reproductive/Teratogenic	High	3071151
117-81-7	6-7 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization (Measured in: F1 generation), Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA F1 generation	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Growth (Development-Deformation, Response Site: Not reported)	NOEC (40.8 ug/L)	Development/Growth	High	3071151

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	6-7 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization (Measured in: F1 generation), Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA F1 generation	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Reproduction (Reproduction-Hatch, Response Site: Not reported)	NOEC (40.8 ug/L)	Reproductive/Teratogenic	High	3071151
117-81-7	<=7 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (40.8 ug/L)	Mortality	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Biochemical (Hormone(s)-17beta-Estradiol:Testosterone ratio, Response Site: Plasma)	NR (4.2-40.8 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (40.8 ug/L)	Development/Growth	High	3071151
117-81-7	6-7 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (4.2 ug/L)	Reproductive/Teratogenic	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Growth (Development-Stage, Response Site: Not reported)	NOEC (4.2 ug/L)	Development/Growth	High	3071151

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117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Liver)	NOEC (4.2 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Biochemical (Hormone(s)-17beta-Estradiol:Testosterone ratio, Response Site: Plasma)	LOEC (13.3 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Cellular (Genetics-CYP19A mRNA, Response Site: Gonad(s))	LOEC (13.3 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity	High	3071151
117-81-7	6 Minutes post-fertilization, (7 Minutes post-fertilization)	*Gobiocypris rarus* (Chinese Rare Minnow), Larva, ~72 Hours post fertilization, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Measured	0 ug/L / 4.2 ug/L / 13.3 ug/L / 40.8 ug/L	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	LOEC (13.3 ug/L)	Mechanistic: Cell signaling/function; Endocrine toxicity	High	3071151
117-81-7	27 Day(s), (27 Day(s))	*Lampetra planeri* (Lamprey), Not reported, Not Reported, Wild (UNPOLLUTED STREAMS IN SOUTH SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	~0.001-1.43 mg/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	BAF (~0.001-1.43 mg/L)	ADME (biotransformation)	Uninformative	59542
117-81-7	96 Hour(s), (96 Hour(s))	*Lepomis macrochirus* (Bluegill), Juvenile, Not Reported, Not reported (NR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.20 mg/L)	Mortality	High	1321996

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117-81-7	1-42 Day(s), (42 Day(s))	*Lepomis macrochirus* (Bluegill), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARMERS IN CONNECTICUT AND NEBRASKA)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 5.82 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (5.82 ug/L)	ADME (biotransformation)	Medium	18050
117-81-7	24 Hour(s), (96 Hour(s))	*Lepomis macrochirus* (Bluegill), Not reported, Not Reported, Laboratory (COMMERCIAL FISH SUPPLIERS IN CONNECTICUT AND MISSOURI)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.017 mg/L / 0.080-0.32 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.32 mg/L)	Mortality	High	1316201
117-81-7	48 Hour(s), (96 Hour(s))	*Lepomis macrochirus* (Bluegill), Not reported, Not Reported, Laboratory (COMMERCIAL FISH SUPPLIERS IN CONNECTICUT AND MISSOURI)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.017 mg/L / 0.080-0.32 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.32 mg/L)	Mortality	High	1316201
117-81-7	72 Hour(s), (96 Hour(s))	*Lepomis macrochirus* (Bluegill), Not reported, Not Reported, Laboratory (COMMERCIAL FISH SUPPLIERS IN CONNECTICUT AND MISSOURI)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.017 mg/L / 0.080-0.32 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.32 mg/L)	Mortality	High	1316201

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117-81-7	96 Hour(s), (96 Hour(s))	*Lepomis macrochirus* (Bluegill), Not reported, Not Reported, Laboratory (COMMERCIAL FISH SUPPLIERS IN CONNECTICUT AND MISSOURI)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.017 mg/L / 0.080-0.32 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.32 mg/L)	Mortality	High	1316201
117-81-7	24 Hour(s), (96 Hour(s))	*Lepomis macrochirus* (Bluegill), Young of year, Not Reported, Laboratory (FROM COMMERCIAL FISH SUPPLIERS WITHIN THE CONTINENTAL UNITED STATES)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>770 AI mg/L)	Mortality	Medium	18064
117-81-7	96 Hour(s), (96 Hour(s))	*Lepomis macrochirus* (Bluegill), Young of year, Not Reported, Laboratory (FROM COMMERCIAL FISH SUPPLIERS WITHIN THE CONTINENTAL UNITED STATES)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>770 AI mg/L)	Mortality	Medium	18064
117-81-7	96 Hour(s), (96 Hour(s))	*Oncorhynchus mykiss* (Rainbow Trout), Juvenile, Not Reported, Not reported (NR)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.32 mg/L)	Mortality	High	1321996

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117-81-7	24 Hour(s), (96 Hour(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (OBTAINED FROM COMMERCIAL FISH SUPPLIERS IN MARYLAND AND MONTANA)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.0092 (<0.0086-<0.0092) mg/L / 0.022 (0.020-0.027) mg/L / 0.041 (0.034-0.047) mg/L / 0.066 (0.041-0.082) mg/L / 0.15 (0.13-0.16) mg/L / 0.32 (0.28-0.34) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.32 mg/L)	Mortality	High	5530771
117-81-7	48 Hour(s), (96 Hour(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (OBTAINED FROM COMMERCIAL FISH SUPPLIERS IN MARYLAND AND MONTANA)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.0092 (<0.0086-<0.0092) mg/L / 0.022 (0.020-0.027) mg/L / 0.041 (0.034-0.047) mg/L / 0.066 (0.041-0.082) mg/L / 0.15 (0.13-0.16) mg/L / 0.32 (0.28-0.34) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.32 mg/L)	Mortality	High	5530771
117-81-7	72 Hour(s), (96 Hour(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (OBTAINED FROM COMMERCIAL FISH SUPPLIERS IN MARYLAND AND MONTANA)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.0092 (<0.0086-<0.0092) mg/L / 0.022 (0.020-0.027) mg/L / 0.041 (0.034-0.047) mg/L / 0.066 (0.041-0.082) mg/L / 0.15 (0.13-0.16) mg/L / 0.32 (0.28-0.34) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.32 mg/L)	Mortality	High	5530771

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117-81-7	96 Hour(s), (96 Hour(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (OBTAINED FROM COMMERCIAL FISH SUPPLIERS IN MARYLAND AND MONTANA)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.0092 (<0.0086-<0.0092) mg/L / 0.022 (0.020-0.027) mg/L / 0.041 (0.034-0.047) mg/L / 0.066 (0.041-0.082) mg/L / 0.15 (0.13-0.16) mg/L / 0.32 (0.28-0.34) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (0.32 (0.28-0.34) mg/L)	Mortality	High	5530771
117-81-7	96 Hour(s), (96 Hour(s))	*Oncorhynchus mykiss* (Rainbow Trout), Juvenile, 60 Day(s), Not Reported, Laboratory (ENIS NATIONAL FISH HATCHERY, ENIS, MONTANA)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Chemical analysis reported	0 mg/L / 19.5 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (19.5 mg/L)	Mortality	High	5774391
117-81-7	90 Day(s), (90 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Egg, <72 Hours post fertilization (Measured in: Embryo), Not Reported, Laboratory (ENIS NATIONAL FISH HATCHERY, ENIS, MONTANA)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Embryo	Measured	<0.020 mg/L / 0.052 mg/L / 0.087 mg/L / 0.143 mg/L / 0.259 mg/L / 0.496 mg/L	Mortality (Mortality-Hatch, Response Site: Not reported)	NOEC (0.496 mg/L)	Mortality	High	5774391

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117-81-7	90 Day(s), (90 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Egg, <72 Hours post fertilization (Measured in: Juvenile), Not Reported, Laboratory (ENIS NATIONAL FISH HATCHERY, ENIS, MONTANA)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Juvenile	Measured	<0.020 mg/L / 0.045 mg/L / 0.106 mg/L / 0.174 mg/L / 0.259 mg/L / 0.508 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.508 mg/L)	Mortality	High	5774391
117-81-7	90 Day(s), (90 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Egg, <72 Hours post fertilization, Not Reported, Laboratory (ENIS NATIONAL FISH HATCHERY, ENIS, MONTANA)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Egg	Measured	<0.020 mg/L / 0.045 mg/L / 0.106 mg/L / 0.174 mg/L / 0.259 mg/L / 0.508 mg/L	Mortality (Mortality-Hatch, Response Site: Not reported)	NOEC (0.508 mg/L)	Mortality	High	5774391
117-81-7	90 Day(s), (90 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Egg, <72 Hours post fertilization (Measured in: Juvenile), Not Reported, Laboratory (ENIS NATIONAL FISH HATCHERY, ENIS, MONTANA)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Juvenile	Measured	<0.020 mg/L / 0.045 mg/L / 0.106 mg/L / 0.174 mg/L / 0.259 mg/L / 0.508 mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (0.508 mg/L)	Development/Growth	High	5774391

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117-81-7	90 Day(s), (90 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Egg, <72 Hours post fertilization (Measured in: Juvenile), Not Reported, Laboratory (ENIS NATIONAL FISH HATCHERY, ENIS, MONTANA)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Juvenile	Measured	<0.020 mg/L / 0.052 mg/L / 0.087 mg/L / 0.143 mg/L / 0.259 mg/L / 0.496 mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (0.496 mg/L)	Development/Growth	High	5774391
117-81-7	90 Day(s), (90 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Egg, <72 Hours post fertilization (Measured in: Embryo), Not Reported, Laboratory (ENIS NATIONAL FISH HATCHERY, ENIS, MONTANA)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Embryo	Measured	<0.020 mg/L / 0.045 mg/L / 0.106 mg/L / 0.174 mg/L / 0.259 mg/L / 0.508 mg/L	Mortality (Mortality-Hatch, Response Site: Not reported)	NOEC (0.508 mg/L)	Mortality	High	5774391
117-81-7	90 Day(s), (90 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Egg, <72 Hours post fertilization, Not Reported, Laboratory (ENIS NATIONAL FISH HATCHERY, ENIS, MONTANA)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Egg	Measured	<0.020 mg/L / 0.052 mg/L / 0.087 mg/L / 0.143 mg/L / 0.259 mg/L / 0.496 mg/L	Mortality (Mortality-Hatch, Response Site: Not reported)	NOEC (0.496 mg/L)	Mortality	High	5774391

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117-81-7	90 Day(s), (90 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Egg, <72 Hours post fertilization (Measured in: Juvenile), Not Reported, Laboratory (ENIS NATIONAL FISH HATCHERY, ENIS, MONTANA)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Juvenile	Measured	<0.020 mg/L / 0.052 mg/L / 0.087 mg/L / 0.143 mg/L / 0.259 mg/L / 0.496 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.496 mg/L)	Mortality	High	5774391
117-81-7	4 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 2.0 % diet	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (2.0 % diet)	Mortality	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Docosenoic acid (C22:1n-11), Response Site: Adipose tissue)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Eicosapentaenoic acid, Response Site: Adipose tissue)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Erucic acid, Response Site: Adipose tissue)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221

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117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Gadoleic acid, Response Site: Adipose tissue)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Docosapentaenoic acid, Response Site: Adipose tissue)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-18:1(n-5) fatty acid, Response Site: Liver)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Linoleic acid, Response Site: Adipose tissue)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Arachidonate, Response Site: Adipose tissue)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221

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117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-18:1(n-5) fatty acid, Response Site: Adipose tissue)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-11-Hexadecenoic acid, Response Site: Adipose tissue)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Palmitoleic acid, Response Site: Adipose tissue)	LOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Palmitic acid, Response Site: Adipose tissue)	LOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Docosahexaenoic acid, Response Site: Adipose tissue)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Linolenic acid, all cis, Response Site: Adipose tissue)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Stearidonic acid, Response Site: Liver)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Octadecenoic acid (C18:1n-7), Response Site: Adipose tissue)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Oleic acid, Response Site: Adipose tissue)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Stearic acid, Response Site: Adipose tissue)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Stearidonic acid, Response Site: Adipose tissue)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Stearic acid, Response Site: Muscle)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Enzyme(s)-Acyl-CoA oxidase, Response Site: Liver)	NOEC (2.0 % diet)	Mechanistic: Liver toxicology	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 4 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Fatty acids, free,Lipid,Total phospholipid content,Steryl esters and wax esters,Sterols,Triglycerides, Response Site: Adipose tissue,Liver,Muscle)	NR (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Enzyme(s)-Palmitoyl-CoA, Response Site: Liver)	NOEC (2.0 % diet)	Mechanistic: Liver toxicology	Low	5353221

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Enzyme(s)-Cytochrome C-oxidase, Response Site: Liver)	NOEC (2.0 % diet)	Mechanistic: Liver toxicology	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Enzyme(s)-Catalase, Response Site: Liver)	NOEC (2.0 % diet)	Mechanistic: Liver toxicology	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Stearidonic acid, Response Site: Muscle)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 23 Organism	Unmeasured	0 % diet / 2.0 % diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (2.0 % diet)	Development/Growth	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Myristic acid, Response Site: Adipose tissue)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 4 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Lipid, Response Site: Adipose tissue)	LOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Palmitoleic acid, Response Site: Muscle)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Docosenoic acid (C22:1n-11), Response Site: Muscle)	LOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Octadecenoic acid (C18:1n-7), Response Site: Muscle)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Oleic acid, Response Site: Muscle)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Palmitic acid, Response Site: Liver)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 8 Organism	Unmeasured	0 % diet / 2.0 % diet	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Liver)	NOEC (2.0 % diet)	Hepatic/Liver	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Palmitoleic acid, Response Site: Liver)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Docosahexaenoic acid, Response Site: Liver)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Octadecenoic acid (C18:1n-7), Response Site: Liver)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Arachidonate, Response Site: Liver)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Stearic acid, Response Site: Liver)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Gadoleic acid, Response Site: Muscle)	LOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 4 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Lipid, Response Site: Liver)	LOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Oleic acid, Response Site: Liver)	LOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-11-Hexadecenoic acid, Response Site: Liver)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-11-Hexadecenoic acid, Response Site: Muscle)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-18:1(n-5) fatty acid, Response Site: Muscle)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Myristic acid, Response Site: Muscle)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Palmitic acid, Response Site: Muscle)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 4 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Lipid, Response Site: Muscle)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Docosenoic acid (C22:1n-11), Response Site: Liver)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Myristic acid, Response Site: Liver)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Eicosapentaenoic acid, Response Site: Muscle)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Docosapentaenoic acid, Response Site: Muscle)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Docosapentaenoic acid, Response Site: Liver)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Docosahexaenoic acid, Response Site: Muscle)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Linoleic acid, Response Site: Muscle)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 6 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Protein content, Response Site: Liver)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Gadoleic acid, Response Site: Liver)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Linoleic acid, Response Site: Liver)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Linolenic acid, all cis, Response Site: Liver)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Arachidonate, Response Site: Muscle)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Linolenic acid, all cis, Response Site: Muscle)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Erucic acid, Response Site: Muscle)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Week(s), (7 Week(s))	*Oncorhynchus mykiss* (Rainbow Trout), Not reported, Not Reported, Laboratory (COMMERCIAL FISH FARM)	Fresh water, Oral (diet, drink, gavage), Food, 3 Organism	Unmeasured	0 % diet / 2.0 % diet	Biochemical (Biochemistry-Eicosapentaenoic acid, Response Site: Liver)	NOEC (2.0 % diet)	Nutritional and Metabolic	Low	5353221
117-81-7	15 Day(s), (100 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Eyed egg or stage, eyed embryo (Measured in: Sac fry, yolk sac fry), Not Reported, Laboratory (SARATOGA NATIONAL FISH HATCHERY, WYOMING)	Fresh water, Aqueous (aquatic habitat), Flow-through, 50 Sac fry, yolk sac fry	Measured	0 ug/L / 5 ug/L / 14 ug/L / 54 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (5 ug/L)	Mortality	Medium	791717
117-81-7	15 Day(s), (100 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Eyed egg or stage, eyed embryo (Measured in: Sac fry, yolk sac fry), Not Reported, Laboratory (SARATOGA NATIONAL FISH HATCHERY, WYOMING)	Fresh water, Aqueous (aquatic habitat), Flow-through, 50 Sac fry, yolk sac fry	Measured	0 ug/L / 5 ug/L / 14 ug/L / 54 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEC (14 ug/L)	Mortality	Medium	791717

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	22 Day(s), (100 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Eyed egg or stage, eyed embryo (Measured in: Sac fry, yolk sac fry), Not Reported, Laboratory (SARATOGA NATIONAL FISH HATCHERY, WYOMING)	Fresh water, Aqueous (aquatic habitat), Flow-through, 50 Sac fry, yolk sac fry	Measured	0 ug/L / 5 ug/L / 14 ug/L / 54 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEC (14 ug/L)	Mortality	Medium	791717
117-81-7	22 Day(s), (100 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Eyed egg or stage, eyed embryo (Measured in: Sac fry, yolk sac fry), Not Reported, Laboratory (SARATOGA NATIONAL FISH HATCHERY, WYOMING)	Fresh water, Aqueous (aquatic habitat), Flow-through, 50 Sac fry, yolk sac fry	Measured	0 ug/L / 5 ug/L / 14 ug/L / 54 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (5 ug/L)	Mortality	Medium	791717
117-81-7	34 Day(s), (100 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Eyed egg or stage, eyed embryo (Measured in: Sac fry, yolk sac fry), Not Reported, Laboratory (SARATOGA NATIONAL FISH HATCHERY, WYOMING)	Fresh water, Aqueous (aquatic habitat), Flow-through, 50 Sac fry, yolk sac fry	Measured	0 ug/L / 5 ug/L / 14 ug/L / 54 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEC (14 ug/L)	Mortality	Medium	791717

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	34 Day(s), (100 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Eyed egg or stage, eyed embryo (Measured in: Fry), Not Reported, Laboratory (SARATOGA NATIONAL FISH HATCHERY, WYOMING)	Fresh water, Aqueous (aquatic habitat), Flow-through, 50 Fry	Measured	0 ug/L / 5 ug/L / 14 ug/L / 54 ug/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	BCF (54 ug/L)	ADME (biotransformation)	Medium	791717
117-81-7	34 Day(s), (100 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Eyed egg or stage, eyed embryo (Measured in: Fry), Not Reported, Laboratory (SARATOGA NATIONAL FISH HATCHERY, WYOMING)	Fresh water, Aqueous (aquatic habitat), Flow-through, 50 Fry	Measured	0 ug/L / 5 ug/L / 14 ug/L / 54 ug/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	BCF (5 ug/L)	ADME (biotransformation)	Medium	791717
117-81-7	34 Day(s), (100 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Eyed egg or stage, eyed embryo (Measured in: Fry), Not Reported, Laboratory (SARATOGA NATIONAL FISH HATCHERY, WYOMING)	Fresh water, Aqueous (aquatic habitat), Flow-through, 50 Fry	Measured	0 ug/L / 5 ug/L / 14 ug/L / 54 ug/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	BCF (14 ug/L)	ADME (biotransformation)	Medium	791717

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	34 Day(s), (100 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Eyed egg or stage, eyed embryo (Measured in: Sac fry, yolk sac fry), Not Reported, Laboratory (SARATOGA NATIONAL FISH HATCHERY, WYOMING)	Fresh water, Aqueous (aquatic habitat), Flow-through, 50 Sac fry, yolk sac fry	Measured	0 ug/L / 5 ug/L / 14 ug/L / 54 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (5 ug/L)	Mortality	Medium	791717
117-81-7	40-100 Day(s), (100 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Eyed egg or stage, eyed embryo (Measured in: Egg), Not Reported, Laboratory (SARATOGA NATIONAL FISH HATCHERY, WYOMING)	Fresh water, Aqueous (aquatic habitat), Flow-through, 50 Egg	Measured	0 ug/L / 5 ug/L / 14 ug/L / 54 ug/L	Growth (Development-Developmental changes, general, Response Site: Not reported)	NOEC (54 ug/L)	Development/Growth	Medium	791717
117-81-7	40-100 Day(s), (100 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Eyed egg or stage, eyed embryo (Measured in: Egg), Not Reported, Laboratory (SARATOGA NATIONAL FISH HATCHERY, WYOMING)	Fresh water, Aqueous (aquatic habitat), Flow-through, 50 Egg	Measured	0 ug/L / 5 ug/L / 14 ug/L / 54 ug/L	Growth (Growth-Growth, general, Response Site: Not reported)	NOEC (54 ug/L)	Development/Growth	Medium	791717

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	100 Day(s), (100 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Eyed egg or stage, eyed embryo (Measured in: Egg), Not Reported, Laboratory (SARATOGA NATIONAL FISH HATCHERY, WYOMING)	Fresh water, Aqueous (aquatic habitat), Flow-through, 50 Egg	Measured	0 ug/L / 5 ug/L / 14 ug/L / 54 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (54 ug/L)	Mortality	Medium	791717
117-81-7	100 Day(s), (100 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Eyed egg or stage, eyed embryo (Measured in: Egg), Not Reported, Laboratory (SARATOGA NATIONAL FISH HATCHERY, WYOMING)	Fresh water, Aqueous (aquatic habitat), Flow-through, 50 Egg	Measured	0 ug/L / 5 ug/L / 14 ug/L / 54 ug/L	Mortality (Mortality-Hatch, Response Site: Not reported)	NOEC (54 ug/L)	Mortality	Medium	791717
117-81-7	5-6 Months post-hatch, (5-6 Months post-hatch)	*Oryzias latipes* (Japanese Medaka), Egg, Both, Laboratory (PET STORE)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Population (Population-Sex ratio, Response Site: Not reported)	NR (0.01-10 ug/L)	Reproductive/Teratogenic	Medium	1334110
117-81-7	5-6 Months post-hatch, (5-6 Months post-hatch)	*Oryzias latipes* (Japanese Medaka), Egg, Both, Laboratory (PET STORE)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (0.01-10 ug/L)	Mortality	Medium	1334110
117-81-7	NA Until hatch, (5-6 Months post-hatch)	*Oryzias latipes* (Japanese Medaka), Egg, Both, Laboratory (PET STORE)	Fresh water, Aqueous (aquatic habitat), Renewal, 30 Organism	Unmeasured	0 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Mortality (Mortality-Hatch, Response Site: Not reported)	NOEC (10 ug/L)	Mortality	Medium	1334110
117-81-7	NA Until hatch, (5-6 Months post-hatch)	*Oryzias latipes* (Japanese Medaka), Egg, Both, Laboratory (PET STORE)	Fresh water, Aqueous (aquatic habitat), Renewal, 30 Organism	Unmeasured	0 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Development-Eye opening, Response Site: Not reported)	NOEC (10 ug/L)	Development/Growth	Medium	1334110

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	5-6 Months post-hatch, (5-6 Months post-hatch)	*Oryzias latipes* (Japanese Medaka), Egg, Both (Measured in: Male organisms), Laboratory (PET STORE)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Gonad(s))	NOEC (10 ug/L)	Reproductive/Teratogenic	Medium	1334110
117-81-7	5-6 Months post-hatch, (5-6 Months post-hatch)	*Oryzias latipes* (Japanese Medaka), Egg, Both (Measured in: Female organisms), Laboratory (PET STORE)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Unmeasured	0 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Gonad(s))	NOEC (10 ug/L)	Reproductive/Teratogenic	Medium	1334110
117-81-7	5-6 Months post-hatch, (5-6 Months post-hatch)	*Oryzias latipes* (Japanese Medaka), Egg, Both (Measured in: Male organisms), Laboratory (PET STORE)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (0.1 ug/L)	Development/Growth	Medium	1334110
117-81-7	5-6 Months post-hatch, (5-6 Months post-hatch)	*Oryzias latipes* (Japanese Medaka), Egg, Both (Measured in: Male organisms), Laboratory (PET STORE)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (0.01 ug/L)	Development/Growth	Medium	1334110
117-81-7	5-6 Months post-hatch, (5-6 Months post-hatch)	*Oryzias latipes* (Japanese Medaka), Egg, Both (Measured in: Female organisms), Laboratory (PET STORE)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Unmeasured	0 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (10 ug/L)	Development/Growth	Medium	1334110
117-81-7	>12-<14 Day(s), (5-6 Months post-hatch)	*Oryzias latipes* (Japanese Medaka), Egg, Both, Laboratory (PET STORE)	Fresh water, Aqueous (aquatic habitat), Renewal, 28-42 Organism	Unmeasured	0 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Mortality (Mortality-Hatch, Response Site: Not reported)	NR (0.01-10 ug/L)	Mortality	Medium	1334110

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	6 Month(s), (6 Month(s))	*Oryzias latipes* (Japanese Medaka), Fry, 1 Days post-hatch, Not Reported, Laboratory (PURCHASED FROM A PET SHOP)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Unmeasured	0 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Gonad(s))	NOEC (10 ug/L)	Development/Growth	Medium	1333890
117-81-7	6 Month(s), (6 Month(s))	*Oryzias latipes* (Japanese Medaka), Fry, 1 Days post-hatch (Measured in: Adult), Not Reported, Laboratory (PURCHASED FROM A PET SHOP)	Fresh water, Aqueous (aquatic habitat), Renewal, 15 Adult	Unmeasured	0 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Population (Population-Sex ratio, Response Site: Not reported)	NOEC (10 ug/L)	Reproductive/Teratogenic	Medium	1333890
117-81-7	6 Month(s), (6 Month(s))	*Oryzias latipes* (Japanese Medaka), Fry, 1 Days post-hatch, Not Reported, Laboratory (PURCHASED FROM A PET SHOP)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NR (0.01-10 ug/L)	Development/Growth	Medium	1333890
117-81-7	6 Month(s), (6 Month(s))	*Oryzias latipes* (Japanese Medaka), Fry, 1 Days post-hatch (Measured in: Adult), Not Reported, Laboratory (PURCHASED FROM A PET SHOP)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Adult	Unmeasured	0 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (10 ug/L)	Mortality	Medium	1333890
117-81-7	6 Month(s), (6 Month(s))	*Oryzias latipes* (Japanese Medaka), Fry, 1 Days post-hatch, Not Reported, Laboratory (PURCHASED FROM A PET SHOP)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Unmeasured	0 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (0.1 ug/L)	Development/Growth	Medium	1333890

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	6 Month(s), (6 Month(s))	*Oryzias latipes* (Japanese Medaka), Fry, 1 Days post-hatch, Not Reported, Laboratory (PURCHASED FROM A PET SHOP)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Unmeasured	0 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (0.01 ug/L)	Development/Growth	Medium	1333890
117-81-7	6 Month(s), (6 Month(s))	*Oryzias latipes* (Japanese Medaka), Fry, 1 Days post-hatch, Not Reported, Laboratory (PURCHASED FROM A PET SHOP)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Gonad(s))	NR (0.01-10 ug/L)	Development/Growth	Medium	1333890
117-81-7	96 Hour(s), (96 Hour(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 29-34 Day(s), Not Reported, Laboratory (ENVIRONMENTAL RESEARCH LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Chemical analysis reported	0 mg/L / 0.67 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (0.67 mg/L)	Mortality	High	5774391
117-81-7	28 Day(s), (168 Day(s))	*Oryzias latipes* (Japanese Medaka), Larva, <1-3 Day(s), Not Reported, Laboratory (ENVIRONMENTAL RESEARCH LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.043 mg/L / 0.566 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.566 mg/L)	Mortality	High	5774391

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117-81-7	28 Day(s), (168 Day(s))	*Oryzias latipes* (Japanese Medaka), Larva, <1-3 Day(s), Not Reported, Laboratory (ENVIRONMENTAL RESEARCH LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.049 mg/L / 0.541 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.541 mg/L)	Mortality	High	5774391
117-81-7	56 Day(s), (168 Day(s))	*Oryzias latipes* (Japanese Medaka), Larva, <1-3 Day(s), Not Reported, Laboratory (ENVIRONMENTAL RESEARCH LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.049 mg/L / 0.541 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.541 mg/L)	Mortality	High	5774391
117-81-7	56 Day(s), (168 Day(s))	*Oryzias latipes* (Japanese Medaka), Larva, <1-3 Day(s), Not Reported, Laboratory (ENVIRONMENTAL RESEARCH LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.043 mg/L / 0.566 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.566 mg/L)	Mortality	High	5774391
117-81-7	84 Day(s), (168 Day(s))	*Oryzias latipes* (Japanese Medaka), Larva, <1-3 Day(s), Not Reported, Laboratory (ENVIRONMENTAL RESEARCH LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.043 mg/L / 0.566 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.566 mg/L)	Mortality	High	5774391

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117-81-7	84 Day(s), (168 Day(s))	*Oryzias latipes* (Japanese Medaka), Larva, <1-3 Day(s), Not Reported, Laboratory (ENVIRONMENTAL RESEARCH LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.049 mg/L / 0.541 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.541 mg/L)	Mortality	High	5774391
117-81-7	112 Day(s), (168 Day(s))	*Oryzias latipes* (Japanese Medaka), Larva, <1-3 Day(s), Not Reported, Laboratory (ENVIRONMENTAL RESEARCH LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.043 mg/L / 0.566 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.566 mg/L)	Mortality	High	5774391
117-81-7	112 Day(s), (168 Day(s))	*Oryzias latipes* (Japanese Medaka), Larva, <1-3 Day(s), Not Reported, Laboratory (ENVIRONMENTAL RESEARCH LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.049 mg/L / 0.541 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.541 mg/L)	Mortality	High	5774391
117-81-7	168 Day(s), (168 Day(s))	*Oryzias latipes* (Japanese Medaka), Larva, <1-3 Day(s), Not Reported, Laboratory (ENVIRONMENTAL RESEARCH LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.049 mg/L / 0.541 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.541 mg/L)	Mortality	High	5774391

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	0-168 Day(s), (168 Day(s))	*Oryzias latipes* (Japanese Medaka), Larva, <1-3 Day(s), Not Reported, Laboratory (ENVIRONMENTAL RESEARCH LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.049 mg/L / 0.541 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.541 mg/L)	Mortality	High	5774391
117-81-7	0-168 Day(s), (168 Day(s))	*Oryzias latipes* (Japanese Medaka), Larva, <1-3 Day(s), Not Reported, Laboratory (ENVIRONMENTAL RESEARCH LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.043 mg/L / 0.566 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.566 mg/L)	Mortality	High	5774391
117-81-7	168 Day(s), (168 Day(s))	*Oryzias latipes* (Japanese Medaka), Larva, <1-3 Day(s), Not Reported, Laboratory (ENVIRONMENTAL RESEARCH LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.043 mg/L / 0.566 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.566 mg/L)	Mortality	High	5774391
117-81-7	168 Day(s), (168 Day(s))	*Oryzias latipes* (Japanese Medaka), Larva, <1-3 Day(s), Not Reported, Laboratory (ENVIRONMENTAL RESEARCH LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.043 mg/L / 0.566 mg/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (0.566 mg/L)	Development/Growth	High	5774391

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	168 Day(s), (168 Day(s))	*Oryzias latipes* (Japanese Medaka), Larva, <1-3 Day(s), Not Reported, Laboratory (ENVIRONMENTAL RESEARCH LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.049 mg/L / 0.541 mg/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (0.541 mg/L)	Development/Growth	High	5774391
117-81-7	5 Day(s), (5 Day(s))	*Oryzias latipes* (Japanese Medaka), 7 Month(s), Both, Laboratory (BREEDING STOCK FROM KOREA RESEARCH INSTITUTE OF CHEMICAL TECHNOLOGY)	Fresh water, Aqueous (aquatic habitat), Not reported, NA Both male and female	Unmeasured	0 ug/L / 10 ug/L / 50 ug/L / 100 ug/L	Biochemical (Biochemistry-Vitellogenin, Response Site: Serum)	NR (10-100 ug/L)	Mechanistic: Cell signaling/function	Uninformative	1303977
117-81-7	3 Month(s), (3 Month(s))	*Oryzias latipes* (Japanese Medaka), Post-hatch, 1-2 Days post-hatch, Both (Measured in: Female organisms), Laboratory (BREEDING STOCK FROM KOREA RESEARCH INSTITUTE OF CHEMICAL TECHNOLOGY)	Fresh water, Aqueous (aquatic habitat), Renewal, 13 Female organisms	Chemical analysis reported	0 ug/L / 1 ug/L / 10 ug/L / 50 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (50 ug/L)	Development/Growth	Medium	1303977

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Month(s), (3 Month(s))	*Oryzias latipes* (Japanese Medaka), Post-hatch, 1-2 Days post-hatch, Both (Measured in: Female organisms), Laboratory (BREEDING STOCK FROM KOREA RESEARCH INSTITUTE OF CHEMICAL TECHNOLOGY)	Fresh water, Aqueous (aquatic habitat), Renewal, 12 Female organisms	Chemical analysis reported	0 ug/L / 1 ug/L / 10 ug/L / 50 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Ovaries)	LOEC (10 ug/L)	Development/Growth	Medium	1303977
117-81-7	3 Month(s), (3 Month(s))	*Oryzias latipes* (Japanese Medaka), Post-hatch, 1-2 Days post-hatch, Both (Measured in: Female organisms), Laboratory (BREEDING STOCK FROM KOREA RESEARCH INSTITUTE OF CHEMICAL TECHNOLOGY)	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Female organisms	Chemical analysis reported	0 ug/L / 1 ug/L / 10 ug/L / 50 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Ovaries)	NOEC (1 ug/L)	Development/Growth	Medium	1303977
117-81-7	3 Month(s), (3 Month(s))	*Oryzias latipes* (Japanese Medaka), Post-hatch, 1-2 Days post-hatch, Both (Measured in: Female organisms), Laboratory (BREEDING STOCK FROM KOREA RESEARCH INSTITUTE OF CHEMICAL TECHNOLOGY)	Fresh water, Aqueous (aquatic habitat), Renewal, 13 Female organisms	Chemical analysis reported	0 ug/L / 1 ug/L / 10 ug/L / 50 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (50 ug/L)	Development/Growth	Medium	1303977

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Month(s), (3 Month(s))	*Oryzias latipes* (Japanese Medaka), Post-hatch, 1-2 Days post-hatch, Both (Measured in: Male organisms), Laboratory (BREEDING STOCK FROM KOREA RESEARCH INSTITUTE OF CHEMICAL TECHNOLOGY)	Fresh water, Aqueous (aquatic habitat), Renewal, 14 Male organisms	Chemical analysis reported	0 ug/L / 1 ug/L / 10 ug/L / 50 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (50 ug/L)	Development/Growth	Medium	1303977
117-81-7	3 Month(s), (3 Month(s))	*Oryzias latipes* (Japanese Medaka), Post-hatch, 1-2 Days post-hatch, Both (Measured in: Male organisms), Laboratory (BREEDING STOCK FROM KOREA RESEARCH INSTITUTE OF CHEMICAL TECHNOLOGY)	Fresh water, Aqueous (aquatic habitat), Renewal, 14 Male organisms	Chemical analysis reported	0 ug/L / 1 ug/L / 10 ug/L / 50 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Testes)	NOEC (50 ug/L)	Development/Growth	Medium	1303977
117-81-7	3 Month(s), (3 Month(s))	*Oryzias latipes* (Japanese Medaka), Post-hatch, 1-2 Days post-hatch, Both (Measured in: Male organisms), Laboratory (BREEDING STOCK FROM KOREA RESEARCH INSTITUTE OF CHEMICAL TECHNOLOGY)	Fresh water, Aqueous (aquatic habitat), Renewal, 14 Male organisms	Chemical analysis reported	0 ug/L / 1 ug/L / 10 ug/L / 50 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (50 ug/L)	Development/Growth	Medium	1303977

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	0-3 Month(s), (3 Month(s))	*Oryzias latipes* (Japanese Medaka), Post-hatch, 1-2 Days post-hatch, Both (Measured in: Male organisms), Laboratory (BREEDING STOCK FROM KOREA RESEARCH INSTITUTE OF CHEMICAL TECHNOLOGY)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Chemical analysis reported	0 ug/L / 1 ug/L / 10 ug/L / 50 ug/L	Growth (Morphology-Abnormal, Response Site: Testes)	NR (1-50 ug/L)	Development/Growth	Medium	1303977
117-81-7	3 Month(s), (3 Month(s))	*Oryzias latipes* (Japanese Medaka), Post-hatch, 1-2 Days post-hatch, Both, Laboratory (BREEDING STOCK FROM KOREA RESEARCH INSTITUTE OF CHEMICAL TECHNOLOGY)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Chemical analysis reported	0 ug/L / 1 ug/L / 10 ug/L / 50 ug/L	Biochemical (Biochemistry-Vitellogenin, Response Site: Serum)	NR (1-50 ug/L)	Mechanistic: Cell signaling/function	Uninformative	1303977
117-81-7	3 Month(s), (3 Month(s))	*Oryzias latipes* (Japanese Medaka), Post-hatch, 1-2 Days post-hatch, Both, Laboratory (BREEDING STOCK FROM KOREA RESEARCH INSTITUTE OF CHEMICAL TECHNOLOGY)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Chemical analysis reported	0 ug/L / 1 ug/L / 10 ug/L / 50 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NR (1-50 ug/L)	Mortality	Uninformative	1303977

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	0-3 Month(s), (3 Month(s))	*Oryzias latipes* (Japanese Medaka), Post-hatch, 1-2 Days post-hatch, Both (Measured in: Female organisms), Laboratory (BREEDING STOCK FROM KOREA RESEARCH INSTITUTE OF CHEMICAL TECHNOLOGY)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Chemical analysis reported	0 ug/L / 1 ug/L / 10 ug/L / 50 ug/L	Growth (Development-Sexual development, Response Site: Not reported)	NR (1-50 ug/L)	Development/Growth	Medium	1303977
117-81-7	84-109 Day(s), (84-109 Day(s))	*Oryzias latipes* (Japanese Medaka), Post-hatch, 1 Days post-hatch, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 59 Organism	Unmeasured	0 ug/L / 500 ug/L / 1000 ug/L / 5000 ug/L	Growth (Morphology-Imposex, intersex conditions, Response Site: Not reported)	NOEC (5000 ug/L)	Development/Growth	Low	1333925
117-81-7	84-109 Day(s), (84-109 Day(s))	*Oryzias latipes* (Japanese Medaka), Post-hatch, 1 Days post-hatch, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 82 Organism	Unmeasured	0 ug/L / 0.5 ug/L / 1.0 ug/L / 5.0 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (5.0 ug/L)	Development/Growth	Low	1333925
117-81-7	84-109 Day(s), (84-109 Day(s))	*Oryzias latipes* (Japanese Medaka), Post-hatch, 1 Days post-hatch, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 82 Organism	Unmeasured	0 ug/L / 0.5 ug/L / 1.0 ug/L / 5.0 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (5.0 ug/L)	Development/Growth	Low	1333925
117-81-7	84-109 Day(s), (84-109 Day(s))	*Oryzias latipes* (Japanese Medaka), Post-hatch, 1 Days post-hatch, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 82 Organism	Unmeasured	0 ug/L / 0.5 ug/L / 1.0 ug/L / 5.0 ug/L	Growth (Growth-Condition index, Response Site: Whole organism)	NOEC (5.0 ug/L)	Development/Growth	Low	1333925

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	84-109 Day(s), (84-109 Day(s))	*Oryzias latipes* (Japanese Medaka), Post-hatch, 1 Days post-hatch, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 59 Organism	Unmeasured	0 ug/L / 500 ug/L / 1000 ug/L / 5000 ug/L	Population (Population-Sex ratio, Response Site: Not reported)	NOEC (5000 ug/L)	Reproductive/Teratogenic	Medium	1333925
117-81-7	<=17 Day(s), (~17 Day(s))	*Oryzias latipes* (Japanese Medaka), Blastula, Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / <=195.5 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (<=195.5 mg/L)	Mortality	Uninformative	5489073
117-81-7	<=17 Day(s), (~17 Day(s))	*Oryzias latipes* (Japanese Medaka), Blastula, Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / <=195.5 mg/L	Cellular (Histology-Lesions, Response Site: Whole organism)	NR (<=195.5 mg/L)	Development/Growth	Uninformative	5489073
117-81-7	2 Week(s), (2 Week(s))	*Oryzias latipes* (Japanese Medaka), Adult, 10-15 Month(s), Male, Laboratory (FISH FARM)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 0.3 umol/L / 1 umol/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEC (1 umol/L)	Reproductive/Teratogenic	Uninformative	1337871

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	2 Week(s), (2 Week(s))	*Oryzias latipes* (Japanese Medaka), Adult, 10-15 Month(s), Male, Laboratory (FISH FARM)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 0.3 umol/L / 1 umol/L	Reproduction (Reproduction-Hatch, Response Site: Not reported)	NOEC (1 umol/L)	Reproductive/Teratogenic	Uninformative	1337871
117-81-7	3 Week(s), (3 Week(s))	*Oryzias latipes* (Japanese Medaka), Adult, 10-15 Month(s), Male, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 0.3 umol/L / 1 umol/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (1 umol/L)	Reproductive/Teratogenic	Medium	683795
117-81-7	1 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (204.8 ug/L)	Development/Growth	High	4728529
117-81-7	3 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (204.8 ug/L)	Development/Growth	High	4728529
117-81-7	7 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (22.7 ug/L)	Development/Growth	High	4728529
117-81-7	14 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Biochemical (Enzyme(s)-Catalase, Response Site: Not reported)	NOEC (204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	14 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NR (22.7-204.8 ug/L)	Development/Growth	High	4728529

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Not reported)	NOEC (204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	14 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Biochemical (Biochemistry-Reactive oxygen species, Response Site: Not reported)	NOEC (204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	14 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Biochemical (Enzyme(s)-Glutathione S-transferase, Response Site: Not reported)	NOEC (204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	14 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Biochemical (Enzyme(s)-Glutathione reductase, Response Site: Not reported)	NOEC (204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	14 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Not reported)	LOEC (22.7 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Cellular (Genetics-Peroxisome proliferator-activated receptor beta mRNA, Response Site: Not reported)	NR (22.7-204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Cellular (Genetics-bax mRNA, Response Site: Not reported)	NOEC (204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Physiology (Intoxication-Mobility, Response Site: Not reported)	NOEC (204.8 ug/L)	Behavioral	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Cellular (Genetics-Retinoid X receptor, alpha a mRNA, Response Site: Not reported)	LOEC (204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 160 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (204.8 ug/L)	Mortality	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Growth (Growth-Condition index, Response Site: Whole organism)	NOEC (204.8 ug/L)	Development/Growth	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Cellular (Genetics-Acetylcholinesterase mRNA, Response Site: Not reported)	NOEC (22.7 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Cellular (Genetics-Glutathione S-transferase mRNA, Response Site: Not reported)	NOEC (22.7 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Behavior (Behavior-Swimming, Response Site: Not reported)	NR (22.7-204.8 ug/L)	Behavioral	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NR (22.7-204.8 ug/L)	Development/Growth	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Biochemical (Biochemistry-Reactive oxygen species, Response Site: Not reported)	NR (22.7-204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Biochemical (Enzyme(s)-Caspase 3, Response Site: Whole organism)	NR (22.7-204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Cellular (Genetics-Caspase-3 mRNA, Response Site: Not reported)	NR (22.7-204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Cellular (Genetics-Glutathione Peroxidase mRNA, Response Site: Not reported)	NR (22.7-204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Cellular (Genetics-Peroxisome proliferator activated receptor alpha b mRNA, Response Site: Not reported)	NR (22.7-204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Cellular (Genetics-Peroxisome proliferator-activated receptor alpha a mRNA, Response Site: Not reported)	NR (22.7-204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Cellular (Genetics-B-cell lymphoma/leukemia 2-gene mRNA, Response Site: Not reported)	LOEC (204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Biochemical (Enzyme(s)-Glutathione S-transferase, Response Site: Not reported)	NOEC (204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Cellular (Genetics-p21 (CDKN1A)-activated kinase 2a mRNA, Response Site: Not reported)	NOEC (204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Not reported)	NOEC (204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Cellular (Genetics-p53 mRNA, Response Site: Not reported)	LOEC (204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Biochemical (Enzyme(s)-Catalase, Response Site: Not reported)	NOEC (204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Whole organism)	NOEC (204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Not reported)	NOEC (204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Behavior (Behavior-Swimming, Response Site: Not reported)	NOEC (204.8 ug/L)	Behavioral	High	4728529

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Cellular (Genetics-Glutathione S-transferase mRNA, Response Site: Not reported)	LOEC (120.4 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Cellular (Genetics-Peroxisome proliferator-activated receptor gamma mRNA, Response Site: Not reported)	NOEC (204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Cellular (Genetics-Acetylcholinesterase mRNA, Response Site: Not reported)	LOEC (120.4 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Cellular (Genetics-Retinoid X receptor, alpha a mRNA, Response Site: Not reported)	NOEC (120.4 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Cellular (Genetics-B-cell lymphoma/leukemia 2-gene mRNA, Response Site: Not reported)	NOEC (120.4 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Biochemical (Enzyme(s)-Glutathione reductase, Response Site: Not reported)	NOEC (204.8 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 8 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (22.7 ug/L)	Development/Growth	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Cellular (Genetics-Superoxide dismutase mRNA, Response Site: Not reported)	LOEC (22.7 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Cellular (Genetics-Catalase mRNA, Response Site: Not reported)	LOEC (22.7 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 4 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Cellular (Genetics-p53 mRNA, Response Site: Not reported)	NOEC (120.4 ug/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	4728529
117-81-7	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Fry, 7 Days post-hatch, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Renewal, 8 Organism	Measured	0 ug/L / 0 ug/L / 22.7 ug/L / 120.4 ug/L / 204.8 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (22.7 ug/L)	Development/Growth	High	4728529
117-81-7	24 Hour(s), (24 Hour(s))	*Oryzias melastigma* (Indian Medaka), Embryo, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.01 ppm / 0.06 ppm / 0.30 ppm / 0.60 ppm / 1.50 ppm / 10.00 ppm / 50.00 ppm	Biochemical (Hormone(s)-Estrogen (Oestrogen), Response Site: Liver)	NR (0.01-50.00 ppm)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity; Endocrine toxicity; Reproductive/Teratogenic	Medium	2298079

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	<84 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Reproduction (Reproduction-Time to spawn, Response Site: Not reported)	LOEC (0.1 mg/L)	Reproductive/Teratogenic	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 15 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Brain)	NOEC (0.5 mg/L)	Development/Growth	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Estrogen receptor gamma mRNA, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Follicle stimulating hormone beta mRNA, Response Site: Brain)	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-CYP19b mRNA, Response Site: Brain)	LOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Androgen receptor mRNA, Response Site: Brain)	LOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	LOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 15 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Development/Growth	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 15 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Development/Growth	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Steroidogenic Acute Regulatory protein mRNA, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Steroid 17-alpha-hydroxylase/17,20 lyase mRNA, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Peroxisome proliferator-activated receptor alpha mRNA, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010

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117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Nuclear receptor subfamily 5 group A member 2 mRNA, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Low-density lipoprotein receptor mRNA, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Low-density lipoprotein receptor mRNA, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-insulin-like growth factor 1 mRNA, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Growth hormone receptor mRNA, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Estrogen receptor beta mRNA, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-CYP19b mRNA, Response Site: Brain)	NOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Biochemistry-Vitellogenin, Response Site: Liver)	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Hormone(s)-17beta-Estradiol:Testosterone ratio, Response Site: Plasma)	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-11beta-Hydroxysteroid dehydrogenase mRNA, Response Site: Gonad(s))	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-11beta-Hydroxysteroid dehydrogenase mRNA, Response Site: Gonad(s))	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-17 beta-hydroxysteroid dehydrogenase mRNA, Response Site: Gonad(s))	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Androgen receptor mRNA, Response Site: Gonad(s))	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Estrogen receptor alpha mRNA, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-CYP19A mRNA, Response Site: Gonad(s))	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-CYP19b mRNA, Response Site: Gonad(s))	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Estrogen receptor gamma mRNA, Response Site: Gonad(s))	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Glucocorticoid receptor mRNA, Response Site: Gonad(s))	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Glucocorticoid receptor mRNA, Response Site: Gonad(s))	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Gonadoliberin-2 mRNA, Response Site: Brain)	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Androgen receptor mRNA, Response Site: Brain)	NOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Growth hormone receptor mRNA, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Estrogen receptor beta mRNA, Response Site: Brain)	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Estrogen receptor alpha mRNA, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Nuclear receptor subfamily 5 group A member 2 mRNA, Response Site: Gonad(s))	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Cytochrome P450 3A mRNA, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Cytochrome P450 21A mRNA, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Cytochrome P450 21A mRNA, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-CYP19b mRNA, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-CYP19A mRNA, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-CYP11beta mRNA, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 15 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Brain)	NOEC (0.5 mg/L)	Development/Growth	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-CYP11beta mRNA, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Peroxisome proliferator-activated receptor alpha mRNA, Response Site: Gonad(s))	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Steroid 17-alpha-hydroxylase/17,20 lyase mRNA, Response Site: Gonad(s))	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Steroidogenic Acute Regulatory protein mRNA, Response Site: Gonad(s))	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-insulin-like growth factor 1 mRNA, Response Site: Gonad(s))	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 15 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Growth (Growth-Condition index, Response Site: Whole organism)	NOEC (0.5 mg/L)	Development/Growth	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 15 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Growth (Growth-Condition index, Response Site: Whole organism)	NOEC (0.5 mg/L)	Development/Growth	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Plasma)	NR (0.1-0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Androgen receptor mRNA, Response Site: Brain)	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Cytochrome P450 3A mRNA, Response Site: Gonad(s))	NR (0.1-0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Biochemistry-Vitellogenin, Response Site: Liver)	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Estrogen receptor alpha mRNA, Response Site: Brain)	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Androgen receptor mRNA, Response Site: Gonad(s))	NR (0.1-0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Estrogen receptor alpha mRNA, Response Site: Brain)	NR (0.1-0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Estrogen receptor beta mRNA, Response Site: Brain)	NR (0.1-0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Estrogen receptor beta mRNA, Response Site: Gonad(s))	NR (0.1-0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Estrogen receptor gamma mRNA, Response Site: Brain)	NR (0.1-0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Estrogen receptor gamma mRNA, Response Site: Brain)	NR (0.1-0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Follicle stimulating hormone beta mRNA, Response Site: Brain)	NR (0.1-0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Gonadoliberin-2 mRNA, Response Site: Brain)	NR (0.1-0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Both male and female	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Histology-Histological changes, general, Response Site: Ovaries,Testes)	NR (0.1-0.5 mg/L)	Reproductive/Teratogenic	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-17 beta-hydroxysteroid dehydrogenase mRNA, Response Site: Gonad(s))	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Hormone(s)-17beta-Estradiol:Testosterone ratio, Response Site: Plasma)	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Plasma)	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~180 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, 5 Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-CYP19b mRNA, Response Site: Brain)	NR (0.1-0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2519010
117-81-7	~187 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	LOEC (0.1 mg/L)	Reproductive/Teratogenic	Medium	2519010

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	~187 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Population (Population-Sex ratio, Response Site: Not reported)	NR (0.1-0.5 mg/L)	Reproductive/Teratogenic	Medium	2519010
117-81-7	~187 Day(s), (~187 Day(s))	*Oryzias melastigma* (Indian Medaka), Larva, 1 Weeks post-hatch, Not Reported, Not reported	Salt water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 mg/L / 0.1 mg/L / 0.5 mg/L	Reproduction (Reproduction-Fertilization, Response Site: Not reported)	LOEC (0.1 mg/L)	Reproductive/Teratogenic	Medium	2519010
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Biochemistry-Complement component C3-1, Response Site: Kidney)	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Physiology (Immunological-Respiratory Burst activity, Response Site: Kidney)	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Physiology (Immunological-Immunoglobulin, Response Site: Kidney)	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.5 mg/L)	Mortality	Uninformative	4742097

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117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (0.5 mg/L)	Development/Growth	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Liver)	NOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Liver)	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Biochemistry-Total antioxidant capacity, Response Site: Liver)	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (0.5 mg/L)	Mortality	Uninformative	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Biochemistry-Complement C4, Response Site: Kidney)	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097

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117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Biochemistry-Cholesterol, Response Site: Liver)	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Growth (Growth-Specific growth rate, Response Site: Whole organism)	NOEC (0.1 mg/L)	Development/Growth	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Myeloid differentiation primary response protein MyD88 mRNA, Response Site: Not reported)	NOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Growth (Growth-Weight gain, Response Site: Whole organism)	NOEC (0.5 mg/L)	Development/Growth	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Biochemistry-Triglycerides, Response Site: Liver)	NOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Physiology (Physiology-Food conversion efficiency, Response Site: Not reported)	NOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097

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117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEC (0.1 mg/L)	Behavioral	Uninformative	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Myeloid differentiation primary response protein MyD88 mRNA, Response Site: Not reported)	LOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Liver)	LOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Enzyme(s)-Glutathione peroxidase, Response Site: Liver)	LOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Biochemistry-Triglycerides, Response Site: Liver)	LOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEC (0.5 mg/L)	Behavioral	Uninformative	4742097

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Physiology (Immunological-Phagocytosis, Response Site: Kidney)	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Liver)	LOEC (0.1 mg/L)	Development/Growth	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Cellular (Genetics-Toll-like Receptor 5 mRNA , Response Site: Not reported)	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Enzyme(s)-Glutamic-oxaloacetic transaminase, Response Site: Liver)	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Enzyme(s)-Alanine transaminase (ALT), Response Site: Liver)	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Biochemistry-Protein, total, Response Site: Liver)	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097

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117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Liver)	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Biochemistry-Glucose, Response Site: Liver)	LOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Enzyme(s)-Glutathione peroxidase, Response Site: Liver)	NOEC (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Growth (Growth-Specific growth rate, Response Site: Whole organism)	LOEC (0.5 mg/L)	Development/Growth	High	4742097
117-81-7	57 Day(s), (57 Day(s))	*Pelteobagrus fulvidraco* (Yellow Catfish), Juvenile, Not Reported, Laboratory (FISH FARM, JIAXIANG, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Chemical analysis reported	0 mg/L / 0.1 mg/L / 0.5 mg/L	Biochemical (Enzyme(s)-Alkaline phosphatase, Response Site: Liver)	NR (0.1-0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	4742097
117-81-7	27 Day(s), (27 Day(s))	*Phoxinus phoxinus* (Minnow), Not reported, Not Reported, Wild (UNPOLLUTED STREAMS IN SOUTH SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	~0.001-1.43 mg/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	BAF (~0.001-1.43 mg/L)	ADME (biotransformation)	Uninformative	59542

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117-81-7	96 Hour(s), (96 Hour(s))	*Pimephales promelas* (Fathead Minnow), Juvenile, Not Reported, Not reported (NR)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.67 mg/L)	Mortality	High	1321996
117-81-7	96 Hour(s), (96 Hour(s))	*Pimephales promelas* (Fathead Minnow), Juvenile, Not Reported, Not reported (NR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.16 mg/L)	Mortality	High	1321996
117-81-7	24 Hour(s), (96 Hour(s))	*Pimephales promelas* (Fathead Minnow), Not reported, Not Reported, Laboratory (OBTAINED FROM CULTURES MAINTAINED AT EG AND G, BIONOMICS, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.0070 mg/L / 0.078-0.26 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.24 mg/L)	Mortality	High	1316188
117-81-7	48 Hour(s), (96 Hour(s))	*Pimephales promelas* (Fathead Minnow), Not reported, Not Reported, Laboratory (OBTAINED FROM CULTURES MAINTAINED AT EG AND G, BIONOMICS, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.0070 mg/L / 0.078-0.26 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.24 mg/L)	Mortality	High	1316188

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117-81-7	72 Hour(s), (96 Hour(s))	*Pimephales promelas* (Fathead Minnow), Not reported, Not Reported, Laboratory (OBTAINED FROM CULTURES MAINTAINED AT EG AND G, BIONOMICS, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.0070 mg/L / 0.078-0.26 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.24 mg/L)	Mortality	High	1316188
117-81-7	96 Hour(s), (96 Hour(s))	*Pimephales promelas* (Fathead Minnow), Not reported, Not Reported, Laboratory (OBTAINED FROM CULTURES MAINTAINED AT EG AND G, BIONOMICS, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.0070 mg/L / 0.078-0.26 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.24 mg/L)	Mortality	High	1316188
117-81-7	96 Hour(s), (96 Hour(s))	*Pimephales promelas* (Fathead Minnow), Not reported, Not Reported, Laboratory (OBTAINED FROM CULTURES MAINTAINED AT EG AND G, BIONOMICS, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.0070 mg/L / 0.078-0.26 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (0.078-0.26 mg/L)	Mortality	High	1316188

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (96 Hour(s))	*Pimephales promelas* (Fathead Minnow), Not reported, Not Reported, Laboratory (EG AND G BIONOMICS, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.011 (<0.0098-<0.011) mg/L / 0.046 (0.014-0.077) mg/L / 0.089 (0.043-0.15) mg/L / 0.19 (0.086-0.34) mg/L / 0.32 (0.17-0.48) mg/L / 0.67 (0.33-0.99) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.67 mg/L)	Mortality	High	1316189
117-81-7	48 Hour(s), (96 Hour(s))	*Pimephales promelas* (Fathead Minnow), Not reported, Not Reported, Laboratory (EG AND G BIONOMICS, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.011 (<0.0098-<0.011) mg/L / 0.046 (0.014-0.077) mg/L / 0.089 (0.043-0.15) mg/L / 0.19 (0.086-0.34) mg/L / 0.32 (0.17-0.48) mg/L / 0.67 (0.33-0.99) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.67 mg/L)	Mortality	High	1316189
117-81-7	72 Hour(s), (96 Hour(s))	*Pimephales promelas* (Fathead Minnow), Not reported, Not Reported, Laboratory (EG AND G BIONOMICS, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.011 (<0.0098-<0.011) mg/L / 0.046 (0.014-0.077) mg/L / 0.089 (0.043-0.15) mg/L / 0.19 (0.086-0.34) mg/L / 0.32 (0.17-0.48) mg/L / 0.67 (0.33-0.99) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.67 mg/L)	Mortality	High	1316189

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	96 Hour(s), (96 Hour(s))	*Pimephales promelas* (Fathead Minnow), Not reported, Not Reported, Laboratory (EG AND G BIONOMICS, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, 20 Organism	Measured	<0.011 (<0.0098-<0.011) mg/L / 0.046 (0.014-0.077) mg/L / 0.089 (0.043-0.15) mg/L / 0.19 (0.086-0.34) mg/L / 0.32 (0.17-0.48) mg/L / 0.67 (0.33-0.99) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (0.67 (0.33-0.99) mg/L)	Mortality	High	1316189
117-81-7	96 Hour(s), (96 Hour(s))	*Pimephales promelas* (Fathead Minnow), Not reported, Not Reported, Laboratory (EG AND G BIONOMICS, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, 20 Organism	Measured	<0.011 (<0.0098-<0.011) mg/L / 0.046 (0.014-0.077) mg/L / 0.089 (0.043-0.15) mg/L / 0.19 (0.086-0.34) mg/L / 0.32 (0.17-0.48) mg/L / 0.67 (0.33-0.99) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (0.67 (0.33-0.99) mg/L)	Mortality	High	1316189
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-Sulfotransferase family 2A, dehydroepiandrosterone (DHEA)-preferring, member 1 mRNA, Response Site: Testes)	NOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-Sulfotransferase family 2A, dehydroepiandrosterone (DHEA)-preferring, member 1 mRNA, Response Site: Liver)	NOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-Sulfotransferase family 1, cytosolic sulfotransferase 2 mRNA, Response Site: Liver)	NOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-Steroidogenic Acute Regulatory protein mRNA, Response Site: Testes)	NOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-Pregnane X receptor mRNA, Response Site: Liver)	NOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-Peroxisome proliferator-activated receptor alpha mRNA, Response Site: Testes)	NOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-Sulfotransferase family 1, cytosolic sulfotransferase 2 mRNA, Response Site: Testes)	NOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-UDP-glucuronosyltransferase 2B15 mRNA, Response Site: Testes)	NOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Gonad(s))	NOEC (12 ug/L)	Development/Growth	Medium	1014765
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Plasma)	LOEC (12 ug/L)	Mechanistic: ADME	High	1014765
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEC (12 ug/L)	Mechanistic: ADME	High	1014765
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-Estrogen receptor alpha mRNA, Response Site: Liver)	NOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-Luteinizing hormone beta-subunit mRNA, Response Site: Brain)	NOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-Estrogen receptor beta2 protein mRNA, Response Site: Testes)	NOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-CYP17 mRNA, Response Site: Testes)	NOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-Estrogen receptor alpha mRNA, Response Site: Testes)	NOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-Cytochrome P450 3A mRNA, Response Site: Liver)	LOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-Follicle stimulating hormone beta mRNA, Response Site: Brain)	LOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-17 beta-hydroxysteroid dehydrogenase mRNA, Response Site: Testes)	NOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-3B-Hydroxysteroid dehydrogenase mRNA, Response Site: Testes)	NOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-Acyl-coenzyme A oxidase 1 mRNA, Response Site: Testes)	NOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-Androgen receptor mRNA, Response Site: Testes)	NOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-CYP11A mRNA, Response Site: Testes)	NOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-CYP19A1 mRNA, Response Site: Testes)	NOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-Peroxisomal bifunctional enzyme mRNA, Response Site: Testes)	NOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765
117-81-7	28 Day(s), (28 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, Male, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, 9 Male organisms	Unmeasured	0 ug/L / 12 ug/L	Cellular (Genetics-UDP-glucuronosyltransferase 2B15 mRNA, Response Site: Liver)	NOEC (12 ug/L)	Mechanistic: Cell signaling/function; Genotox (including DNA repair)	High	1014765

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	96 Hour(s), (96 Hour(s))	*Pimephales promelas* (Fathead Minnow), Juvenile, 29-34 Day(s), Not Reported, Laboratory (ENVIRONMENTAL RESEARCH LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Chemical analysis reported	NR / NR / 0.327 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.327 mg/L)	Mortality	High	5774391
117-81-7	56 Day(s), (56 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, 7.5 Month(s), Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ug/L / 1.9 ug/L / 2.5 ug/L / 4.6 ug/L / 8.1 ug/L / 14 ug/L / 30 ug/L / 62 ug/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	BCF (1.9-62 ug/L)	ADME (biotransformation)	Medium	791717
117-81-7	56 Day(s), (56 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, 7.5 Month(s), Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ug/L / 1.9 ug/L / 2.5 ug/L / 4.6 ug/L / 8.1 ug/L / 14 ug/L / 30 ug/L / 62 ug/L	Growth (Growth-Growth, general, Response Site: Not reported)	NR (1.9-62 ug/L)	Development/Growth	Uninformative	791717
117-81-7	56 Day(s), (56 Day(s))	*Pimephales promelas* (Fathead Minnow), Adult, 7.5 Month(s), Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ug/L / 1.9 ug/L / 2.5 ug/L / 4.6 ug/L / 8.1 ug/L / 14 ug/L / 30 ug/L / 62 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (1.9-62 ug/L)	Mortality	Uninformative	791717
117-81-7	24 Hour(s), (48 Hour(s))	*Pimephales promelas* (Fathead Minnow), Embryo, 1 Days post fertilization, Not Reported, Laboratory (BREEDING STOCK AT THE UNIVERSITY OF NEW BRUNSWICK (SAINT JOHN))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-DNA (cytosine-5-)-methyltransferase 1 mRNA, Response Site: Not reported)	NOEC (100 ug/L)	Mechanistic: Cell signaling/function	Medium	3071071

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117-81-7	24 Hour(s), (48 Hour(s))	*Pimephales promelas* (Fathead Minnow), Embryo, 1 Days post fertilization, Not Reported, Laboratory (BREEDING STOCK AT THE UNIVERSITY OF NEW BRUNSWICK (SAINT JOHN))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-DNA (cytosine-5-)-methyltransferase 3 alpha a mRNA, Response Site: Not reported)	NOEC (100 ug/L)	Mechanistic: Cell signaling/function	Medium	3071071
117-81-7	24 Hour(s), (48 Hour(s))	*Pimephales promelas* (Fathead Minnow), Embryo, 1 Days post fertilization, Not Reported, Laboratory (BREEDING STOCK AT THE UNIVERSITY OF NEW BRUNSWICK (SAINT JOHN))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-DNA (cytosine-5-)-methyltransferase 3 alpha b mRNA, Response Site: Not reported)	NOEC (100 ug/L)	Mechanistic: Cell signaling/function	Medium	3071071
117-81-7	24 Hour(s), (48 Hour(s))	*Pimephales promelas* (Fathead Minnow), Embryo, 1 Days post fertilization, Not Reported, Laboratory (BREEDING STOCK AT THE UNIVERSITY OF NEW BRUNSWICK (SAINT JOHN))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-DNA (cytosine-5-)-methyltransferase 3 beta mRNA, Response Site: Not reported)	NOEC (100 ug/L)	Mechanistic: Cell signaling/function	Medium	3071071

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117-81-7	24 Hour(s), (48 Hour(s))	*Pimephales promelas* (Fathead Minnow), Embryo, 1 Days post fertilization, Not Reported, Laboratory (BREEDING STOCK AT THE UNIVERSITY OF NEW BRUNSWICK (SAINT JOHN))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-DNA (cytosine-5-)-methyltransferase 3 mRNA, Response Site: Not reported)	NOEC (100 ug/L)	Mechanistic: Cell signaling/function	Medium	3071071
117-81-7	48 Hour(s), (48 Hour(s))	*Pimephales promelas* (Fathead Minnow), Embryo, 1 Days post fertilization, Not Reported, Laboratory (BREEDING STOCK AT THE UNIVERSITY OF NEW BRUNSWICK (SAINT JOHN))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (100 ug/L)	Mortality	Medium	3071071
117-81-7	14 Day(s), (14 Day(s))	*Pimephales promelas* (Fathead Minnow), Larva, 0 Days post-hatch, Not Reported, Laboratory (BREEDING STOCK AT THE UNIVERSITY OF NEW BRUNSWICK (SAINT JOHN))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Cellular (Genetics-DNA methylation, Response Site: Not reported)	NOEC (100 ug/L)	Mechanistic: Cell signaling/function	High	3071071

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117-81-7	14 Day(s), (14 Day(s))	*Pimephales promelas* (Fathead Minnow), Larva, 0 Days post-hatch, Not Reported, Laboratory (BREEDING STOCK AT THE UNIVERSITY OF NEW BRUNSWICK (SAINT JOHN))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 1 ug/L / 10 ug/L / 100 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (100 ug/L)	Mortality	High	3071071
117-81-7	14 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (1 ug/L)	Development/Growth	Medium	697429
117-81-7	14 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (10 ug/L)	Development/Growth	Medium	697429
117-81-7	28 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (1 ug/L)	Development/Growth	Medium	697429
117-81-7	28 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (0.1 ug/L)	Development/Growth	Medium	697429
117-81-7	28 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Condition index, Response Site: Whole organism)	NOEC (10 ug/L)	Development/Growth	Medium	697429
117-81-7	28 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (0.1 ug/L)	Development/Growth	Medium	697429

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	35 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (0.1 ug/L)	Development/Growth	Medium	697429
117-81-7	35 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Condition index, Response Site: Whole organism)	LOEC (1 ug/L)	Development/Growth	Medium	697429
117-81-7	35 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (1 ug/L)	Development/Growth	Medium	697429
117-81-7	35 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (1 ug/L)	Development/Growth	Medium	697429
117-81-7	35 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (0.1 ug/L)	Development/Growth	Medium	697429
117-81-7	35 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Condition index, Response Site: Whole organism)	NOEC (0.1 ug/L)	Development/Growth	Medium	697429
117-81-7	42 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (0.1 ug/L)	Development/Growth	Medium	697429
117-81-7	42 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (0.1 ug/L)	Development/Growth	Medium	697429

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	42 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (1 ug/L)	Development/Growth	Medium	697429
117-81-7	42 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Condition index, Response Site: Whole organism)	NOEC (10 ug/L)	Development/Growth	Medium	697429
117-81-7	49 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Condition index, Response Site: Whole organism)	NOEC (1 ug/L)	Development/Growth	Medium	697429
117-81-7	49 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (1 ug/L)	Development/Growth	Medium	697429
117-81-7	49 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Condition index, Response Site: Whole organism)	LOEC (10 ug/L)	Development/Growth	Medium	697429
117-81-7	49 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (1 ug/L)	Development/Growth	Medium	697429
117-81-7	49 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (0.1 ug/L)	Development/Growth	Medium	697429
117-81-7	49 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both (Measured in: Male organisms), Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, 16 Male organisms	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (0.1 ug/L)	Development/Growth	Medium	697429

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	49 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (0.1 ug/L)	Development/Growth	Medium	697429
117-81-7	49 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both (Measured in: Female organisms), Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, 6 Female organisms	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (0.1 ug/L)	Development/Growth	Medium	697429
117-81-7	49 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both (Measured in: Male organisms), Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, 8 Male organisms	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (1 ug/L)	Development/Growth	Medium	697429
117-81-7	56 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (0.1 ug/L)	Development/Growth	Medium	697429
117-81-7	56 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (1 ug/L)	Development/Growth	Medium	697429
117-81-7	56 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (0.1 ug/L)	Development/Growth	Medium	697429
117-81-7	56 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Condition index, Response Site: Whole organism)	NOEC (10 ug/L)	Development/Growth	Medium	697429
117-81-7	63 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Condition index, Response Site: Whole organism)	NOEC (1 ug/L)	Development/Growth	Medium	697429

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	63 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (0.1 ug/L)	Development/Growth	Medium	697429
117-81-7	63 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (0.1 ug/L)	Development/Growth	Medium	697429
117-81-7	63 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (1 ug/L)	Development/Growth	Medium	697429
117-81-7	63 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (1 ug/L)	Development/Growth	Medium	697429
117-81-7	63 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Condition index, Response Site: Whole organism)	LOEC (10 ug/L)	Development/Growth	Medium	697429
117-81-7	70 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (0.1 ug/L)	Development/Growth	Medium	697429
117-81-7	70 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (0.1 ug/L)	Development/Growth	Medium	697429
117-81-7	70 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (1 ug/L)	Development/Growth	Medium	697429

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	70 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (1 ug/L)	Development/Growth	Medium	697429
117-81-7	70 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Condition index, Response Site: Whole organism)	NOEC (10 ug/L)	Development/Growth	Medium	697429
117-81-7	77 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (0.1 ug/L)	Development/Growth	Medium	697429
117-81-7	77 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (1 ug/L)	Development/Growth	Medium	697429
117-81-7	77 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Condition index, Response Site: Whole organism)	NOEC (10 ug/L)	Development/Growth	Medium	697429
117-81-7	77 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (1 ug/L)	Development/Growth	Medium	697429
117-81-7	77 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (0.1 ug/L)	Development/Growth	Medium	697429
117-81-7	84 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (1 ug/L)	Development/Growth	Medium	697429

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	84 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (1 ug/L)	Development/Growth	Medium	697429
117-81-7	84 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (0.1 ug/L)	Development/Growth	Medium	697429
117-81-7	84 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Condition index, Response Site: Whole organism)	NOEC (10 ug/L)	Development/Growth	Medium	697429
117-81-7	84 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (0.1 ug/L)	Development/Growth	Medium	697429
117-81-7	91 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (1 ug/L)	Development/Growth	Medium	697429
117-81-7	91 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (1 ug/L)	Development/Growth	Medium	697429
117-81-7	91 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (0.1 ug/L)	Development/Growth	Medium	697429
117-81-7	91 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (0.1 ug/L)	Development/Growth	Medium	697429

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	91 Day(s), (91 Day(s))	*Poecilia reticulata* (Guppy), Larva, <1 Week(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L	Growth (Growth-Condition index, Response Site: Whole organism)	NOEC (10 ug/L)	Development/Growth	Medium	697429
117-81-7	27 Day(s), (27 Day(s))	*Pungitius pungitius* (Ninespine Stickleback), Not reported, Not Reported, Wild (UNPOLLUTED STREAMS IN SOUTH SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	~0.001-1.43 mg/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	BAF (~0.001-1.43 mg/L)	ADME (biotransformation)	Uninformative	59542
117-81-7	7-84 Day(s), (5 Month(s))	*Salmo salar* (Atlantic Salmon), Fry, 4 Weeks post-hatch, Not Reported, Wild (FROM RIVER DALALVEN, SWEDEN)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	2 mg/kg diet / 346-371 mg/kg diet / 825-829 mg/kg diet / 1634-1661 mg/kg diet	Accumulation (Accumulation-Residue, Response Site: Whole organism)	NR (346-1661 mg/kg diet)	ADME (biotransformation)	High	5678430
117-81-7	5 Month(s), (5 Month(s))	*Salmo salar* (Atlantic Salmon), Fry, 4 Weeks post-hatch, Not Reported, Wild (FROM RIVER DALALVEN, SWEDEN)	Fresh water, Oral (diet, drink, gavage), Food, 202 Organism	Measured	2 mg/kg diet / 346-371 mg/kg diet / 825-829 mg/kg diet / 1634-1661 mg/kg diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (1634-1661 mg/kg diet)	Development/Growth	Uninformative	5678430
117-81-7	5 Month(s), (5 Month(s))	*Salmo salar* (Atlantic Salmon), Fry, 4 Weeks post-hatch, Not Reported, Wild (FROM RIVER DALALVEN, SWEDEN)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	2 mg/kg diet / 346-371 mg/kg diet / 825-829 mg/kg diet / 1634-1661 mg/kg diet	Growth (Development-Abnormal,Organ/tissue formation, Response Site: Not reported)	NR (346-1661 mg/kg diet)	Development/Growth	Uninformative	5678430

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	5 Month(s), (5 Month(s))	*Salmo salar* (Atlantic Salmon), Fry, 4 Weeks post-hatch, Not Reported, Wild (FROM RIVER DALALVEN, SWEDEN)	Fresh water, Oral (diet, drink, gavage), Food, 199 Organism	Measured	2 mg/kg diet / 346-371 mg/kg diet / 825-829 mg/kg diet / 1634-1661 mg/kg diet	Growth (Morphology-Imposex, intersex conditions, Response Site: Not reported)	NOEC (825-829 mg/kg diet)	Reproductive/Teratogenic	High	5678430
117-81-7	5 Month(s), (5 Month(s))	*Salmo salar* (Atlantic Salmon), Fry, 4 Weeks post-hatch, Not Reported, Wild (FROM RIVER DALALVEN, SWEDEN)	Fresh water, Oral (diet, drink, gavage), Food, 202 Organism	Measured	2 mg/kg diet / 346-371 mg/kg diet / 825-829 mg/kg diet / 1634-1661 mg/kg diet	Population (Population-Sex ratio, Response Site: Not reported)	NOEC (1634-1661 mg/kg diet)	Reproductive/Teratogenic	High	5678430
117-81-7	5 Month(s), (5 Month(s))	*Salmo salar* (Atlantic Salmon), Fry, 4 Weeks post-hatch, Not Reported, Wild (FROM RIVER DALALVEN, SWEDEN)	Fresh water, Oral (diet, drink, gavage), Food, 202 Organism	Measured	2 mg/kg diet / 346-371 mg/kg diet / 825-829 mg/kg diet / 1634-1661 mg/kg diet	Growth (Morphology-Size, Response Site: Testes)	NOEC (1634-1661 mg/kg diet)	Reproductive/Teratogenic	High	5678430
117-81-7	5 Month(s), (5 Month(s))	*Salmo salar* (Atlantic Salmon), Fry, 4 Weeks post-hatch, Not Reported, Wild (FROM RIVER DALALVEN, SWEDEN)	Fresh water, Oral (diet, drink, gavage), Food, 202 Organism	Measured	2 mg/kg diet / 346-371 mg/kg diet / 825-829 mg/kg diet / 1634-1661 mg/kg diet	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Liver)	NOEC (1634-1661 mg/kg diet)	Hepatic/Liver	Uninformative	5678430
117-81-7	5 Month(s), (5 Month(s))	*Salmo salar* (Atlantic Salmon), Fry, 4 Weeks post-hatch, Not Reported, Wild (FROM RIVER DALALVEN, SWEDEN)	Fresh water, Oral (diet, drink, gavage), Food, 202 Organism	Measured	2 mg/kg diet / 346-371 mg/kg diet / 825-829 mg/kg diet / 1634-1661 mg/kg diet	Growth (Growth-Length, Response Site: Whole organism)	NOEC (1634-1661 mg/kg diet)	Development/Growth	Uninformative	5678430

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	5 Month(s), (5 Month(s))	*Salmo salar* (Atlantic Salmon), Fry, 4 Weeks post-hatch, Not Reported, Wild (FROM RIVER DALALVEN, SWEDEN)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Measured	2 mg/kg diet / 346-371 mg/kg diet / 825-829 mg/kg diet / 1634-1661 mg/kg diet	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (1634-1661 mg/kg diet)	Mortality	Uninformative	5678430
117-81-7	5 Month(s), (5 Month(s))	*Salmo salar* (Atlantic Salmon), Fry, 4 Weeks post-hatch, Not Reported, Wild (FROM RIVER DALALVEN, SWEDEN)	Fresh water, Oral (diet, drink, gavage), Food, 202 Organism	Measured	2 mg/kg diet / 346-371 mg/kg diet / 825-829 mg/kg diet / 1634-1661 mg/kg diet	Growth (Morphology-Imposex, intersex conditions, Response Site: Not reported)	LOEC (1634-1661 mg/kg diet)	Reproductive/Teratogenic	High	5678430
117-81-7	17 Day(s), (17 Day(s))	*Salmo salar* (Atlantic Salmon), Juvenile, Not Reported, Wild (FROM SWEDISH RIVER DALALVEN STOCK)	Fresh water, Injection, Intraperitoneal, Not Reported	Unmeasured	0 mg/kg bdwt / 80 mg/kg bdwt / 160 mg/kg bdwt	Biochemical (Biochemistry-Vitellogenin, Response Site: Plasma)	NR (80-160 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	5646979
117-81-7	5 Month(s), (5 Month(s))	*Salmo salar* (Atlantic Salmon), Fry, ~4 Weeks post-hatch, Not Reported, Wild (FROM SWEDISH RIVER DALALVEN STOCK)	Fresh water, Oral (diet, drink, gavage), Food, 82-184 Organism	Unmeasured	0 mg/kg diet / 300 mg/kg diet / 1500 mg/kg diet	Population (Population-Sex ratio, Response Site: Not reported)	NOEC (300 mg/kg diet)	Reproductive/Teratogenic	Medium	5646979
117-81-7	5 Month(s), (5 Month(s))	*Salmo salar* (Atlantic Salmon), Fry, ~4 Weeks post-hatch, Not Reported, Wild (FROM SWEDISH RIVER DALALVEN STOCK)	Fresh water, Oral (diet, drink, gavage), Food, 82-184 Organism	Unmeasured	0 mg/kg diet / 300 mg/kg diet / 1500 mg/kg diet	Population (Population-Sex ratio, Response Site: Not reported)	LOEC (1500 mg/kg diet)	Reproductive/Teratogenic	Medium	5646979

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	5 Month(s), (5 Month(s))	*Salmo salar* (Atlantic Salmon), Fry, ~4 Weeks post-hatch, Not Reported, Wild (FROM SWEDISH RIVER DALALVEN STOCK)	Fresh water, Oral (diet, drink, gavage), Food, 50 Organism	Unmeasured	0 mg/kg diet / 300 mg/kg diet / 1500 mg/kg diet	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Liver)	NOEC (300 mg/kg diet)	Development/Growth	Medium	5646979
117-81-7	5 Month(s), (5 Month(s))	*Salmo salar* (Atlantic Salmon), Fry, ~4 Weeks post-hatch, Not Reported, Wild (FROM SWEDISH RIVER DALALVEN STOCK)	Fresh water, Oral (diet, drink, gavage), Food, 68 Organism	Unmeasured	0 mg/kg diet / 300 mg/kg diet / 1500 mg/kg diet	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Liver)	LOEC (1500 mg/kg diet)	Development/Growth	Medium	5646979
117-81-7	0 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNGBUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (1000 mg/kg diet)	Development/Growth	High	1335887

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	4 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNG-BUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, 10 Organism	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Liver)	NOEC (1000 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887
117-81-7	4 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNG-BUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, 10 Organism	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Muscle)	LOEC (500 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887
117-81-7	4 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNG-BUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, 10 Organism	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Eye)	LOEC (500 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	4 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNG-BUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, 10 Organism	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Eye)	NOEC (100 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887
117-81-7	4 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNG-BUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, 10 Organism	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Muscle)	NOEC (100 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887
117-81-7	4 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNG-BUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, 10 Organism	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Kidney)	NOEC (1000 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	4 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNG-BUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, 10 Organism	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Heart)	NOEC (500 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887
117-81-7	4 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNG-BUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, 10 Organism	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Gill(s))	NOEC (1000 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887
117-81-7	4 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNG-BUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, 10 Organism	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Brain)	LOEC (100 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887

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117-81-7	4 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNGBUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, 10 Organism	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Heart)	LOEC (1000 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887
117-81-7	4 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNGBUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Growth (Growth-Weight, Response Site: Whole organism)	NR (100-1000 mg/kg diet)	Development/Growth	High	1335887
117-81-7	8 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNGBUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, 10 Organism	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Heart)	NOEC (500 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887

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117-81-7	8 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNG-BUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, 10 Organism	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Gill(s))	LOEC (500 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887
117-81-7	8 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNG-BUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, 10 Organism	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Brain)	LOEC (100 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887
117-81-7	8 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNG-BUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, 10 Organism	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Muscle)	LOEC (500 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887

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117-81-7	8 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNGBUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (500 mg/kg diet)	Development/Growth	High	1335887
117-81-7	8 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNGBUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, 10 Organism	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Kidney)	LOEC (100 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887
117-81-7	8 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNGBUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, 10 Organism	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Gill(s))	NOEC (100 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887

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117-81-7	8 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNG-BUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, 10 Organism	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Muscle)	NOEC (100 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887
117-81-7	8 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNG-BUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (100 mg/kg diet)	Development/Growth	High	1335887
117-81-7	8 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNG-BUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, 10 Organism	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Eye)	LOEC (1000 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	8 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNGBUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (1000 mg/kg diet)	Mortality	High	1335887
117-81-7	8 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNGBUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, 10 Organism	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Heart)	LOEC (1000 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887
117-81-7	8 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNGBUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, 10 Organism	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Eye)	NOEC (500 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887

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Aquatic: Fish Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	8 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNGBUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, 10 Organism	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Liver)	NOEC (100 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887
117-81-7	8 Week(s), (8 Week(s))	*Tachysurus fulvidraco* (Yellow Catfish), ~10 Months post-hatch, Not Reported, Laboratory (FROM CHUNGCHENONGBUK-DO INLAND FISHERIES RESEARCH INSTITUTE, CHUNG-JU CITY, CHUNGBUK, KOREA)	Fresh water, Oral (diet, drink, gavage), Food, 10 Organism	Unmeasured	0 mg/kg diet / 100 mg/kg diet / 500 mg/kg diet / 1000 mg/kg diet	Biochemical (Enzyme(s)-Acetylcholinesterase, Response Site: Liver)	LOEC (500 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887

* If multiple extractions contained all identical information except the effect level, extraction rows were collapsed and the differing levels are listed by comma in this row.

Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	76.09 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Growth (Development-Metamorphosis, Response Site: Not reported)	ET50 (0.1 umol/L)	Development/Growth	Medium	5493510
117-81-7	79.77 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Growth (Development-Metamorphosis, Response Site: Not reported)	ET50 (1 umol/L)	Development/Growth	Medium	5493510
117-81-7	63.84-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Cellular (Cell(s)-Height, Response Site: Thyroid)	NOEC (1 umol/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Receptor binding/ regulation of receptor activity	Medium	5493510

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	63.84-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Biochemical (Hormone(s)-Thyroxine, Response Site: Whole organism)	LOEC (1 umol/L)	Endocrine	Medium	5493510
117-81-7	63.84-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Cellular (Histology-Colloid thinning, Response Site: Thyroid)	LOEC (0.1 umol/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Receptor binding/ regulation of receptor activity	Medium	5493510
117-81-7	63.84-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Cellular (Genetics-Steroidogenic Acute Regulatory protein mRNA, Response Site: Not reported)	LOEC (0.1 umol/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Receptor binding/ regulation of receptor activity	Medium	5493510

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Growth (Development-Metamorphosis, Response Site: Not reported)	ET50 (10 umol/L)	Development/Growth	Medium	5493510
117-81-7	63.84-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Cellular (Genetics-CYP19 mRNA, Response Site: Not reported)	LOEC (0.1 umol/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Receptor binding/ regulation of receptor activity	Medium	5493510
117-81-7	63-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Growth (Development-Metamorphosis, Response Site: Not reported)	LOEC (0.1 umol/L)	Development/Growth	Medium	5493510

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	63-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (10 umol/L)	Development/Growth	Medium	5493510
117-81-7	63.84-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Cellular (Cell(s)-Length, Response Site: Thyroid)	LOEC (1 umol/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Receptor binding/ regulation of receptor activity	Medium	5493510
117-81-7	63.84-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Cellular (Genetics-Steroid 17-alpha-hydroxylase/17,20 lyase mRNA, Response Site: Not reported)	LOEC (10 umol/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Receptor binding/ regulation of receptor activity	Medium	5493510

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	63-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (10 umol/L)	Development/Growth	Medium	5493510
117-81-7	63-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (1 umol/L)	Development/Growth	Medium	5493510
117-81-7	63.84-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Cellular (Genetics-CYP19 mRNA, Response Site: Not reported)	NOEC (10 umol/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Receptor binding/ regulation of receptor activity	Medium	5493510

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	63-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Growth (Morphology-Length, Response Site: Not reported)	NOEC (10 umol/L)	Development/Growth	Medium	5493510
117-81-7	63.84-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Population (Population-Sex ratio, Response Site: Not reported)	NOEC (1 umol/L)	Development/Growth	Medium	5493510
117-81-7	63.84-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Cellular (Genetics-Steroidogenic Acute Regulatory protein mRNA, Response Site: Not reported)	NOEC (1 umol/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Receptor binding/ regulation of receptor activity	Medium	5493510

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	63.84-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Cellular (Genetics-Steroid 17-alpha-hydroxylase/17,20 lyase mRNA, Response Site: Not reported)	NOEC (1 umol/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Receptor binding/ regulation of receptor activity	Medium	5493510
117-81-7	63.84-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Cellular (Cell(s)-Diameter, Response Site: Thyroid)	NOEC (1 umol/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Receptor binding/ regulation of receptor activity	Medium	5493510
117-81-7	63-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Growth (Morphology-Length, Response Site: Hindlimb)	NOEC (1 umol/L)	Development/Growth	Medium	5493510

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	63-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (1 umol/L)	Development/Growth	Medium	5493510
117-81-7	63-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Growth (Morphology-Length, Response Site: Hindlimb)	LOEC (10 umol/L)	Development/Growth	Medium	5493510
117-81-7	63.84-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Cellular (Cell(s)-Length, Response Site: Thyroid)	NOEC (0.1 umol/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Receptor binding/ regulation of receptor activity	Medium	5493510

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	63.84-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Biochemical (Hormone(s)-Triiodothyronine, Response Site: Whole organism)	NOEC (0.1 umol/L)	Endocrine	Medium	5493510
117-81-7	63.84-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Biochemical (Hormone(s)-Thyroxine, Response Site: Whole organism)	NOEC (0.1 umol/L)	Endocrine	Medium	5493510
117-81-7	63.84-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Population (Population-Sex ratio, Response Site: Not reported)	LOEC (10 umol/L)	Development/Growth	Medium	5493510

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	63.84-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Female organisms	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Cellular (Genetics-Steroidogenic Acute Regulatory protein mRNA, Response Site: Not reported)	LOEC (10 umol/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Receptor binding/ regulation of receptor activity	Medium	5493510
117-81-7	63.84-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Cellular (Cell(s)-Height, Response Site: Thyroid)	LOEC (10 umol/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Receptor binding/ regulation of receptor activity	Medium	5493510
117-81-7	63.84-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Cellular (Cell(s)-Diameter, Response Site: Thyroid)	LOEC (10 umol/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Receptor binding/ regulation of receptor activity	Medium	5493510

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	63.84-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Biochemical (Hormone(s)-Triiodothyronine, Response Site: Whole organism)	LOEC (1 umol/L)	Endocrine	Medium	5493510
117-81-7	63.84-84.96 Day(s), (84.96 Day(s))	*Hoplobatrachus rugulosus* (Rugose Frog), Tadpole, 26-27 Gosner stage, Not Reported, Wild (MATING PAIRS COLLECTED FROM THE QINLING MOUNTAINS, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Male organisms	Unmeasured	0 umol/L / 0.1 umol/L / 1 umol/L / 10 umol/L	Cellular (Genetics-Steroid 17-alpha-hydroxylase/17,20 lyase mRNA, Response Site: Not reported)	LOEC (0.1 umol/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Receptor binding/ regulation of receptor activity	Medium	5493510
117-81-7	21 Day(s), (26 Day(s))	*Rana arvalis* (Moorfrog), Egg, Not Reported, Wild (POND ON SMALL ISLAND IN UMEALVENS DELTA, NORTH OF UMEA, SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, NA Egg	Measured	<0.05-0.10 ug/L / <0.05 ug/L / <0.05-0.23 ug/L / <0.05-1.29 ug/L / 0.23-1.93 ug/L	Mortality (Mortality-Hatch, Response Site: Not reported)	NOEC (0.23-1.93 ug/L)	Mortality	High	7328184
117-81-7	21 Day(s), (26 Day(s))	*Rana arvalis* (Moorfrog), Egg, Not Reported, Wild (POND ON SMALL ISLAND IN UMEALVENS DELTA, NORTH OF UMEA, SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, NA Egg	Measured	<0.05 ug/L / <0.05 ug/L / <0.05 ug/L / <0.05-0.09 ug/L / 0.62-1.54 ug/L	Mortality (Mortality-Hatch, Response Site: Not reported)	NOEC (0.62-1.54 ug/L)	Mortality	High	7328184

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	26 Day(s), (26 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (POND ON SMALL ISLAND IN UMEALVENS DELTA, NORTH OF UMEA, SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, NA Tadpole	Measured	<0.05-0.10 ug/L / <0.05 ug/L / <0.05-0.23 ug/L / <0.05-1.29 ug/L / 0.23-1.93 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (0.23-1.93 ug/L)	Mortality	High	7328184
117-81-7	26 Day(s), (26 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (POND ON SMALL ISLAND IN UMEALVENS DELTA, NORTH OF UMEA, SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, NA Tadpole	Measured	<0.05-0.10 ug/L / <0.05 ug/L / <0.05-0.23 ug/L / <0.05-1.29 ug/L / 0.23-1.93 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (0.23-1.93 ug/L)	Development/Growth	High	7328184
117-81-7	26 Day(s), (26 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (POND ON SMALL ISLAND IN UMEALVENS DELTA, NORTH OF UMEA, SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, NA Tadpole	Measured	<0.05-0.10 ug/L / <0.05 ug/L / <0.05-0.23 ug/L / <0.05-1.29 ug/L / 0.23-1.93 ug/L	Growth (Development-Deformation, Response Site: Not reported)	NOEC (0.23-1.93 ug/L)	Development/Growth	High	7328184
117-81-7	26 Day(s), (26 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (POND ON SMALL ISLAND IN UMEALVENS DELTA, NORTH OF UMEA, SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, NA Tadpole	Measured	<0.05 ug/L / <0.05 ug/L / <0.05 ug/L / <0.05-0.09 ug/L / 0.62-1.54 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (0.62-1.54 ug/L)	Mortality	High	7328184

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	26 Day(s), (26 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (POND ON SMALL ISLAND IN UMEALVENS DELTA, NORTH OF UMEA, SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, NA Tadpole	Measured	<0.05 ug/L / <0.05 ug/L / <0.05 ug/L / <0.05-0.09 ug/L / 0.62-1.54 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (0.62-1.54 ug/L)	Development/Growth	High	7328184
117-81-7	26 Day(s), (26 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (POND ON SMALL ISLAND IN UMEALVENS DELTA, NORTH OF UMEA, SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, NA Tadpole	Measured	<0.05 ug/L / <0.05 ug/L / <0.05 ug/L / <0.05-0.09 ug/L / 0.62-1.54 ug/L	Growth (Development-Deformation, Response Site: Not reported)	NOEC (0.62-1.54 ug/L)	Development/Growth	High	7328184
117-81-7	35 Day(s), (35 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (POND ON SMALL ISLAND IN UMEALVENS DELTA, NORTH OF UMEA, SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, NA Tadpole	Measured	<0.05 ug/L / <0.05 ug/L / <0.05-0.22 ug/L / <0.05-0.29 ug/L / <0.05-0.63 ug/L	Growth (Development-Deformation, Response Site: Not reported)	NOEC (<0.05-0.63 ug/L)	Development/Growth	High	7328184
117-81-7	35 Day(s), (35 Day(s))	*Rana arvalis* (Moorfrog), Egg, Not Reported, Wild (POND ON SMALL ISLAND IN UMEALVENS DELTA, NORTH OF UMEA, SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, NA Egg	Measured	<0.05 ug/L / <0.05 ug/L / <0.05-0.22 ug/L / <0.05-0.29 ug/L / <0.05-0.63 ug/L	Mortality (Mortality-Hatch, Response Site: Not reported)	NOEC (<0.05-0.63 ug/L)	Mortality	High	7328184

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	35 Day(s), (35 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (POND ON SMALL ISLAND IN UMEALVENS DELTA, NORTH OF UMEA, SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, NA Tadpole	Measured	<0.05 ug/L / <0.05 ug/L / <0.05 ug/L / <0.05-0.12 ug/L / <0.05-1.14 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (<0.05-1.14 ug/L)	Development/Growth	High	7328184
117-81-7	35 Day(s), (35 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (POND ON SMALL ISLAND IN UMEALVENS DELTA, NORTH OF UMEA, SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, NA Tadpole	Measured	<0.05 ug/L / <0.05 ug/L / <0.05 ug/L / <0.05-0.12 ug/L / <0.05-1.14 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (<0.05-1.14 ug/L)	Mortality	High	7328184
117-81-7	35 Day(s), (35 Day(s))	*Rana arvalis* (Moorfrog), Egg, Not Reported, Wild (POND ON SMALL ISLAND IN UMEALVENS DELTA, NORTH OF UMEA, SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, NA Egg	Measured	<0.05 ug/L / <0.05 ug/L / <0.05 ug/L / <0.05-0.12 ug/L / <0.05-1.14 ug/L	Mortality (Mortality-Hatch, Response Site: Not reported)	NOEC (<0.05-1.14 ug/L)	Mortality	High	7328184
117-81-7	35 Day(s), (35 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (POND ON SMALL ISLAND IN UMEALVENS DELTA, NORTH OF UMEA, SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, NA Tadpole	Measured	<0.05 ug/L / <0.05 ug/L / <0.05 ug/L / <0.05-0.12 ug/L / <0.05-1.14 ug/L	Growth (Development-Deformation, Response Site: Not reported)	NOEC (<0.05-1.14 ug/L)	Development/Growth	High	7328184

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	35 Day(s), (35 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (POND ON SMALL ISLAND IN UMEALVENS DELTA, NORTH OF UMEA, SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, NA Tadpole	Measured	<0.05 ug/L / <0.05 ug/L / <0.05-0.22 ug/L / <0.05-0.29 ug/L / <0.05-0.63 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (<0.05-0.63 ug/L)	Mortality	High	7328184
117-81-7	35 Day(s), (35 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (POND ON SMALL ISLAND IN UMEALVENS DELTA, NORTH OF UMEA, SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, NA Tadpole	Measured	<0.05 ug/L / <0.05 ug/L / <0.05-0.22 ug/L / <0.05-0.29 ug/L / <0.05-0.63 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (<0.05-0.63 ug/L)	Development/Growth	High	7328184
117-81-7	14 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg, Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA (>0-<5) Egg	Measured	0.80 ug/L / 1.5 ug/L / 0.14 ug/L / 0.26 ug/L / 0.30 ug/L / 0.25 ug/L / 0.47 ug/L / 1.00 ug/L / 1.30 ug/L	Growth (Development-Abnormal, Response Site: Not reported)	NR (0.14-1.3 ug/L)	Development/Growth	Medium	7978546
117-81-7	14 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA (>0-<10) Tadpole	Measured	0.80 ug/L / 1.5 ug/L / 0.14 ug/L / 0.26 ug/L / 0.30 ug/L / 0.25 ug/L / 0.47 ug/L / 1.00 ug/L / 1.30 ug/L	Behavior (Behavior-Motility, Response Site: Not reported)	NR (0.14-1.3 ug/L)	Behavioral	Uninformative	7978546

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg, Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA Egg	Measured	0.80 ug/L / 1.5 ug/L / 0.14 ug/L / 0.26 ug/L / 0.30 ug/L / 0.25 ug/L / 0.47 ug/L / 1.00 ug/L / 1.30 ug/L	Mortality (Mortality-Hatch, Response Site: Not reported)	NOEC (1.3 ug/L)	Mortality	Medium	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA (>30-<40) Tadpole	Measured	NR / NR / 255 ug/g dry wt sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NR (255 ug/g dry wt sediment)	Mortality	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Tadpole	Measured	NR / NR / 205 ug/g dry wt sediment	Growth (Growth-Weight, Response Site: Whole organism)	NR (205 ug/g dry wt sediment)	Development/Growth	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA Tadpole	Measured	NR / 1.3 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NR (1.3 ug/L)	Development/Growth	Low	7978546

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg, Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA (>0-<5) Egg	Measured	2.5 ug/g dry wt sediment / 2.4 ug/g dry wt sediment / 13 ug/g dry wt sediment / 28 ug/g dry wt sediment / 41 ug/g dry wt sediment / 77 ug/g dry wt sediment / 137 ug/g dry wt sediment / 223 ug/g dry wt sediment / 433 ug/g dry wt sediment	Growth (Development-Abnormal, Response Site: Not reported)	NR (13-433 ug/g dry wt sediment)	Development/Growth	Medium	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA Tadpole	Measured	NR / NR / 1.5 ug/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	NR (1.5 ug/L)	ADME (biotransformation)	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA (>40-<50) Tadpole	Measured	NR / 1.3 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NR (1.3 ug/L)	Mortality	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Tadpole	Measured	NR / NR / 205 ug/g dry wt sediment	Biochemical (Biochemistry-Lipid, Response Site: Not reported)	NR (205 ug/g dry wt sediment)	ADME (biotransformation)	Low	7978546

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA Tadpole	Measured	NR / 1.3 ug/L	Biochemical (Biochemistry-Lipid, Response Site: Not reported)	NR (1.3 ug/L)	ADME (biotransformation)	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA Tadpole	Measured	NR / 1.3 ug/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	NR (1.3 ug/L)	ADME (biotransformation)	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA Tadpole	Measured	0.80 ug/L / 1.5 ug/L / 0.14 ug/L / 0.26 ug/L / 0.30 ug/L / 0.25 ug/L / 0.47 ug/L / 1.00 ug/L / 1.30 ug/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	NR (0.14-1.3 ug/L)	ADME (biotransformation)	Medium	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA (>40-<50) Tadpole	Measured	0.80 ug/L / 1.5 ug/L / 0.14 ug/L / 0.26 ug/L / 0.30 ug/L / 0.25 ug/L / 0.47 ug/L / 1.00 ug/L / 1.30 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (1.3 ug/L)	Mortality	Medium	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA Tadpole	Measured	0.80 ug/L / 1.5 ug/L / 0.14 ug/L / 0.26 ug/L / 0.30 ug/L / 0.25 ug/L / 0.47 ug/L / 1.00 ug/L / 1.30 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (1.3 ug/L)	Development/Growth	Medium	7978546

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA Tadpole	Measured	0.80 ug/L / 1.5 ug/L / 0.14 ug/L / 0.26 ug/L / 0.30 ug/L / 0.25 ug/L / 0.47 ug/L / 1.00 ug/L / 1.30 ug/L	Biochemical (Biochemistry-Lipid, Response Site: Not reported)	NR (0.14-1.3 ug/L)	ADME (biotransformation)	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Tadpole	Measured	2.5 ug/g dry wt sediment / 2.4 ug/g dry wt sediment / 13 ug/g dry wt sediment / 28 ug/g dry wt sediment / 41 ug/g dry wt sediment / 77 ug/g dry wt sediment / 137 ug/g dry wt sediment / 223 ug/g dry wt sediment / 433 ug/g dry wt sediment	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (433 ug/g dry wt sediment)	Development/Growth	Medium	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Tadpole	Measured	NR / NR / 205 ug/g dry wt sediment	Accumulation (Accumulation-Residue, Response Site: Not reported)	NR (205 ug/g dry wt sediment)	ADME (biotransformation)	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Tadpole	Measured	NR / NR / 305 ug/g dry wt sediment	Accumulation (Accumulation-Residue, Response Site: Not reported)	NR (305 ug/g dry wt sediment)	ADME (biotransformation)	Low	7978546

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA (>0-<10) Tadpole	Measured	2.5 ug/g dry wt sediment / 2.4 ug/g dry wt sediment / 13 ug/g dry wt sediment / 28 ug/g dry wt sediment / 41 ug/g dry wt sediment / 77 ug/g dry wt sediment / 137 ug/g dry wt sediment / 223 ug/g dry wt sediment / 433 ug/g dry wt sediment	Behavior (Behavior-Motility, Response Site: Not reported)	NR (13-433 ug/g dry wt sediment)	Behavioral	Uninformative	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA (>30-<40) Tadpole	Measured	NR / NR / 2.3 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NR (2.3 ug/L)	Mortality	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Tadpole	Measured	2.5 ug/g dry wt sediment / 2.4 ug/g dry wt sediment / 13 ug/g dry wt sediment / 28 ug/g dry wt sediment / 41 ug/g dry wt sediment / 77 ug/g dry wt sediment / 137 ug/g dry wt sediment / 223 ug/g dry wt sediment / 433 ug/g dry wt sediment	Biochemical (Biochemistry-Lipid, Response Site: Not reported)	NR (13-433 ug/g dry wt sediment)	ADME (biotransformation)	Low	7978546

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA Tadpole	Measured	NR / NR / 2.3 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NR (2.3 ug/L)	Development/Growth	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA Tadpole	Measured	NR / NR / 2.3 ug/L	Biochemical (Biochemistry-Lipid, Response Site: Not reported)	NR (2.3 ug/L)	ADME (biotransformation)	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA (>40-<50) Tadpole	Measured	NR / NR / 1.5 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NR (1.5 ug/L)	Mortality	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA Tadpole	Measured	NR / NR / 2.0 ug/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	NR (2.0 ug/L)	ADME (biotransformation)	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA Tadpole	Measured	NR / NR / 2.0 ug/L	Biochemical (Biochemistry-Lipid, Response Site: Not reported)	NR (2.0 ug/L)	ADME (biotransformation)	Low	7978546

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA Tadpole	Measured	NR / NR / 2.0 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NR (2.0 ug/L)	Development/Growth	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA (>40-<50) Tadpole	Measured	NR / NR / 2.0 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NR (2.0 ug/L)	Mortality	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA Tadpole	Measured	NR / NR / 2.3 ug/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	NR (2.3 ug/L)	ADME (biotransformation)	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Tadpole	Measured	NR / NR / 305 ug/g dry wt sediment	Biochemical (Biochemistry-Lipid, Response Site: Not reported)	NR (305 ug/g dry wt sediment)	ADME (biotransformation)	Low	7978546

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg, Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Egg	Measured	2.5 ug/g dry wt sediment / 2.4 ug/g dry wt sediment / 13 ug/g dry wt sediment / 28 ug/g dry wt sediment / 41 ug/g dry wt sediment / 77 ug/g dry wt sediment / 137 ug/g dry wt sediment / 223 ug/g dry wt sediment / 433 ug/g dry wt sediment	Mortality (Mortality-Hatch, Response Site: Not reported)	NOEC (433 ug/g dry wt sediment)	Mortality	Medium	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Tadpole	Measured	NR / NR / 305 ug/g dry wt sediment	Growth (Growth-Weight, Response Site: Whole organism)	NR (305 ug/g dry wt sediment)	Development/Growth	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA Tadpole	Measured	NR / NR / 1.5 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NR (1.5 ug/L)	Development/Growth	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Tadpole	Measured	NR / NR / 699 ug/g dry wt sediment	Biochemical (Biochemistry-Lipid, Response Site: Not reported)	NR (699 ug/g dry wt sediment)	ADME (biotransformation)	Low	7978546

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA (>40-<50) Tadpole	Measured	2.5 ug/g dry wt sediment / 2.4 ug/g dry wt sediment / 13 ug/g dry wt sediment / 28 ug/g dry wt sediment / 41 ug/g dry wt sediment / 77 ug/g dry wt sediment / 137 ug/g dry wt sediment / 223 ug/g dry wt sediment / 433 ug/g dry wt sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (433 ug/g dry wt sediment)	Mortality	Medium	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Leaching , NA Tadpole	Measured	NR / NR / 1.5 ug/L	Biochemical (Biochemistry-Lipid, Response Site: Not reported)	NR (1.5 ug/L)	ADME (biotransformation)	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA (>40-<50) Tadpole	Measured	NR / NR / 699 ug/g dry wt sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NR (699 ug/g dry wt sediment)	Mortality	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA (>40-<50) Tadpole	Measured	NR / NR / 305 ug/g dry wt sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NR (305 ug/g dry wt sediment)	Mortality	Low	7978546

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Tadpole	Measured	NR / NR / 255 ug/g dry wt sediment	Accumulation (Accumulation-Residue, Response Site: Not reported)	NR (255 ug/g dry wt sediment)	ADME (biotransformation)	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Tadpole	Measured	NR / NR / 699 ug/g dry wt sediment	Accumulation (Accumulation-Residue, Response Site: Not reported)	NR (699 ug/g dry wt sediment)	ADME (biotransformation)	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA (>40-<50) Tadpole	Measured	NR / NR / 205 ug/g dry wt sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NR (205 ug/g dry wt sediment)	Mortality	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Tadpole	Measured	NR / NR / 255 ug/g dry wt sediment	Growth (Growth-Weight, Response Site: Whole organism)	NR (255 ug/g dry wt sediment)	Development/Growth	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Tadpole	Measured	NR / NR / 699 ug/g dry wt sediment	Growth (Growth-Weight, Response Site: Whole organism)	NR (699 ug/g dry wt sediment)	Development/Growth	Low	7978546

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Tadpole	Measured	2.5 ug/g dry wt sediment / 2.4 ug/g dry wt sediment / 13 ug/g dry wt sediment / 28 ug/g dry wt sediment / 41 ug/g dry wt sediment / 77 ug/g dry wt sediment / 137 ug/g dry wt sediment / 223 ug/g dry wt sediment / 433 ug/g dry wt sediment	Accumulation (Accumulation-Residue, Response Site: Not reported)	NR (13-433 ug/g dry wt sediment)	ADME (biotransformation)	Low	7978546
117-81-7	29 Day(s), (29 Day(s))	*Rana arvalis* (Moorfrog), Egg (Measured in: Tadpole), Not Reported, Wild (EGG CLUMPS COLLECTED IN THE FIELD)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Tadpole	Measured	NR / NR / 255 ug/g dry wt sediment	Biochemical (Biochemistry-Lipid, Response Site: Not reported)	NR (255 ug/g dry wt sediment)	ADME (biotransformation)	Low	7978546

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Week(s), (60 Day(s))	*Rana arvalis* (Moorfrog), Egg, 2-3 Day(s), Not Reported, Wild (EGGS COLLECTED FROM A POND IN SOUTHERN SWEDEN)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	0-0.9 ug/g wet wt sediment / 8.8-10 ug/g wet wt sediment / 23.7-25 ug/g wet wt sediment / 50-54.5 ug/g wet wt sediment / 100-119.5 ug/g wet wt sediment / 131.3-200 ug/g wet wt sediment / 400-431.4 ug/g wet wt sediment / 784.8-800 ug/g wet wt sediment	Accumulation (Accumulation-Residue, Response Site: Not reported)	NR (8.8-800 ug/g wet wt sediment)	ADME (biotransformation)	Medium	5508563
117-81-7	3 Week(s), (60 Day(s))	*Rana arvalis* (Moorfrog), Egg, 2-3 Day(s), Not Reported, Wild (EGGS COLLECTED FROM A POND IN SOUTHERN SWEDEN)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	0-0.9 ug/g wet wt sediment / 8.8-10 ug/g wet wt sediment / 23.7-25 ug/g wet wt sediment / 50-54.5 ug/g wet wt sediment / 100-119.5 ug/g wet wt sediment / 131.3-200 ug/g wet wt sediment / 400-431.4 ug/g wet wt sediment / 784.8-800 ug/g wet wt sediment	Mortality (Mortality-Hatch, Response Site: Not reported)	NR (150 ug/g wet wt sediment)	Mortality	Medium	5508563

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Week(s), (60 Day(s))	*Rana arvalis* (Moorfrog), Egg, 2-3 Day(s), Not Reported, Wild (EGGS COLLECTED FROM A POND IN SOUTHERN SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 ug/L / 0.89-187.40 ug/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	NR (0.89-187.40 ug/L)	ADME (biotransformation)	Medium	5508563
117-81-7	3 Week(s), (60 Day(s))	*Rana arvalis* (Moorfrog), Egg, 2-3 Day(s), Not Reported, Wild (EGGS COLLECTED FROM A POND IN SOUTHERN SWEDEN)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	0-0.9 ug/g wet wt sediment / 8.8-10 ug/g wet wt sediment / 23.7-25 ug/g wet wt sediment / 50-54.5 ug/g wet wt sediment / 100-119.5 ug/g wet wt sediment / 131.3-200 ug/g wet wt sediment / 400-431.4 ug/g wet wt sediment / 784.8-800 ug/g wet wt sediment	Mortality (Mortality-Hatch, Response Site: Not reported)	NR (8.8-800 ug/g wet wt sediment)	Mortality	Medium	5508563

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Week(s), (60 Day(s))	*Rana arvalis* (Moorfrog), Egg, 2-3 Day(s), Not Reported, Wild (EGGS COLLECTED FROM A POND IN SOUTHERN SWEDEN)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	0-0.9 ug/g wet wt sediment / 8.8-10 ug/g wet wt sediment / 23.7-25 ug/g wet wt sediment / 50-54.5 ug/g wet wt sediment / 100-119.5 ug/g wet wt sediment / 131.3-200 ug/g wet wt sediment / 400-431.4 ug/g wet wt sediment / 784.8-800 ug/g wet wt sediment	Growth (Development-Abnormal, Response Site: Not reported)	NR (8.8-800 ug/g wet wt sediment)	Development/Growth	Medium	5508563
117-81-7	21-30 Day(s), (60 Day(s))	*Rana arvalis* (Moorfrog), Egg, 2-3 Day(s), Not Reported, Wild (EGGS COLLECTED FROM A POND IN SOUTHERN SWEDEN)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	0-0.9 ug/g wet wt sediment / 8.8-10 ug/g wet wt sediment / 23.7-25 ug/g wet wt sediment / 50-54.5 ug/g wet wt sediment / 100-119.5 ug/g wet wt sediment / 131.3-200 ug/g wet wt sediment / 400-431.4 ug/g wet wt sediment / 784.8-800 ug/g wet wt sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NR (8.8-800 ug/g wet wt sediment)	Mortality	Medium	5508563

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Month(s), (3 Month(s))	*Xenopus laevis* (African Clawed Frog), Egg (Measured in: Larvae), Not Reported, Laboratory (20 YEAR OLD BREEDING STOCK OF E. THIELMANN (LANGENBERGHEIM))	Fresh water, Aqueous (aquatic habitat), Renewal, 70-83 Larvae	Unmeasured values (some measured values reported in article)	0.1-0.24 ppm / 0.08-0.24 ppm / 0.1 ppm / 0.18-0.45 ppm / 0.34-0.7 ppm / 1.02-3.3 ppm / 10.96-13.0 ppm	Mortality (Mortality-Survival, Response Site: Not reported)	NR (0.1-13.0 ppm)	Mortality	Uninformative	31448
117-81-7	3 Month(s), (3 Month(s))	*Xenopus laevis* (African Clawed Frog), Egg (Measured in: Larvae), Not Reported, Laboratory (20 YEAR OLD BREEDING STOCK OF E. THIELMANN (LANGENBERGHEIM))	Fresh water, Aqueous (aquatic habitat), Renewal, 70-83 Larvae	Chemical analysis reported	0.1-0.24 ppm / 0.08-0.24 ppm / 0.1 ppm / 0.18-0.45 ppm / 0.34-0.7 ppm / 1.02-3.3 ppm / 10.96-13.0 ppm	Growth (Development-Stage, Response Site: Not reported)	LOEC (0.1 ppm)	Development/Growth	Uninformative	31448
117-81-7	200 Day(s), (200 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, Not Reported, Laboratory (20 YEAR OLD BREEDING STOCK OF E. THIELMANN (LANGENBERGHEIM))	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ppm / 0 ppm / 10 ppm	Mortality (Mortality-Survival, Response Site: Not reported)	NR (10 ppm)	Mortality	Uninformative	31448

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	200 Day(s), (200 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, Not Reported, Laboratory (20 YEAR OLD BREEDING STOCK OF E. THIELMANN (LANGEN-BERGHEIM))	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ppm / 0 ppm / 10 ppm	Growth (Development-Developmental changes, general, Response Site: Not reported)	NR (10 ppm)	Development/Growth	Uninformative	31448
117-81-7	200 Day(s), (200 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, Not Reported, Laboratory (20 YEAR OLD BREEDING STOCK OF E. THIELMANN (LANGEN-BERGHEIM))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 10 ppm	Physiology (Physiology-Pigmentation, Response Site: Not reported)	NR (10 ppm)	Development/Growth	Uninformative	31448
117-81-7	200 Day(s), (200 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, Not Reported, Laboratory (20 YEAR OLD BREEDING STOCK OF E. THIELMANN (LANGEN-BERGHEIM))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 10 ppm	Mortality (Mortality-Survival, Response Site: Not reported)	NR (10 ppm)	Mortality	Uninformative	31448
117-81-7	200 Day(s), (200 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, Not Reported, Laboratory (20 YEAR OLD BREEDING STOCK OF E. THIELMANN (LANGEN-BERGHEIM))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 10 ppm	Growth (Growth-Size, Response Site: Whole organism)	NR (10 ppm)	Development/Growth	Uninformative	31448

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Aquatic: Amphibian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	200 Day(s), (200 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, Not Reported, Laboratory (20 YEAR OLD BREEDING STOCK OF E. THIELMANN (LANGEN-BERGHEIM))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 10 ppm	Growth (Development-Developmental changes, general, Response Site: Not reported)	NR (10 ppm)	Development/Growth	Uninformative	31448

* If multiple extractions contained all identical information except the effect level, extraction rows were collapsed and the differing levels are listed by comma in this row.

Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	<=40 Day(s), (9 Week(s))	*Aeshna sp.* (Dragonfly), Larva, Not Reported, Wild (COLLECTED IN A EUTROPHIC POND IN SOUTHERN SWEDEN)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Larvae	Measured	0.4 ug/g wet wt sediment / 587 ug/g wet wt sediment / 623 ug/g wet wt sediment	Behavior (Feeding behavior-Strikes (number of times food source was hit), Response Site: Not reported)	LOEC (587 ug/g wet wt sediment)	Behavioral	Medium	790132
117-81-7	9 Week(s), (9 Week(s))	*Aeshna sp.* (Dragonfly), Larva, Not Reported, Wild (COLLECTED IN A EUTROPHIC POND IN SOUTHERN SWEDEN)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Larvae	Measured	0.4 ug/g wet wt sediment / 587 ug/g wet wt sediment / 623 ug/g wet wt sediment	Accumulation (Accumulation-Residue, Response Site: Whole organism)	LOEC (587 ug/g wet wt sediment)	ADME (biotransformation)	Uninformative	790132
117-81-7	96 Hour(s), (96 Hour(s))	*Americamysis bahia* (Opossum Shrimp), <=24 Hour(s), Not Reported, Not reported (NR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.37 mg/L)	Mortality	High	1321996
117-81-7	96 Hour(s), (96 Hour(s))	*Americamysis bahia* (Opossum Shrimp), Not reported, Not Reported, Laboratory (BIONOMICS MARINE RESEARCH LABORATORY, PENSACOLA, FL)	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0.37 (0.29-0.44) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.44 mg/L)	Mortality	High	1316220
117-81-7	40 Hour(s), (72 Hour(s))	*Artemia salina* (Brine Shrimp), Egg, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ppm / 10 ppm / 20 ppm / 50 ppm	Mortality (Mortality-Hatch, Response Site: Not reported)	NR (50 ppm)	Mortality	Low	1315792

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (21 Day(s))	*Caecidotea brevicauda* (Aquatic Sowbug), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 4 Organism	Measured	1.9 ug/L / 62.3 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (1.9 ug/L)	ADME (biotransformation)	Uninformative	1334646
117-81-7	7 Day(s), (21 Day(s))	*Caecidotea brevicauda* (Aquatic Sowbug), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 4 Organism	Measured	1.9 ug/L / 62.3 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (62.3 ug/L)	ADME (biotransformation)	Uninformative	1334646
117-81-7	14 Day(s), (21 Day(s))	*Caecidotea brevicauda* (Aquatic Sowbug), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 4 Organism	Measured	1.9 ug/L / 62.3 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (1.9 ug/L)	ADME (biotransformation)	Uninformative	1334646
117-81-7	14 Day(s), (21 Day(s))	*Caecidotea brevicauda* (Aquatic Sowbug), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 4 Organism	Measured	1.9 ug/L / 62.3 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (62.3 ug/L)	ADME (biotransformation)	Uninformative	1334646

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	21 Day(s), (21 Day(s))	*Caecidotea brevicauda* (Aquatic Sowbug), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 4 Organism	Measured	1.9 ug/L / 62.3 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (1.9 ug/L)	ADME (biotransformation)	Uninformative	1334646
117-81-7	21 Day(s), (21 Day(s))	*Caecidotea brevicauda* (Aquatic Sowbug), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 4 Organism	Measured	1.9 ug/L / 62.3 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (62.3 ug/L)	ADME (biotransformation)	Uninformative	1334646
117-81-7	1 Day(s), (7 Day(s))	*Chironomus plumosus* (Midge), Larva, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 18 Organism	Measured	0.3 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.3 ug/L)	ADME (biotransformation)	Uninformative	1334646
117-81-7	3 Day(s), (7 Day(s))	*Chironomus plumosus* (Midge), Larva, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 18 Organism	Measured	0.3 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.3 ug/L)	ADME (biotransformation)	Uninformative	1334646

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (7 Day(s))	*Chironomus plumosus* (Midge), Larva, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 18 Organism	Measured	0.3 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.3 ug/L)	ADME (biotransformation)	Uninformative	1334646
117-81-7	NA Until hatch, (2 Generation)	*Chironomus plumosus* (Midge), Pupa (Measured in: F1 generation), Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F1 generation	Measured	0.0 mg/L / 0.14 mg/L / 0.20 mg/L / 0.36 mg/L	Reproduction (Reproduction-Hatch, Response Site: Not reported)	NOEC (0.36 mg/L)	Reproductive/Teratogenic	Uninformative	813673
117-81-7	NA Until hatch, (2 Generation)	*Chironomus plumosus* (Midge), Pupa (Measured in: F1 generation), Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F1 generation	Measured	0.0 mg/L / 0.14 mg/L / 0.20 mg/L / 0.36 mg/L	Reproduction (Reproduction-Hatch, Response Site: Not reported)	NOEC (0.36 mg/L)	Reproductive/Teratogenic	Uninformative	813673

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA Egg(s) laid, (2 Generation)	*Chironomus plumosus* (Midge), Pupa (Measured in: F1 generation), Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F1 generation	Measured	0.0 mg/L / 0.14 mg/L / 0.20 mg/L / 0.36 mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NR (0.14-0.36 mg/L)	Reproductive/Teratogenic	Uninformative	813673
117-81-7	NA Egg(s) laid, (2 Generation)	*Chironomus plumosus* (Midge), Pupa (Measured in: F1 generation), Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F1 generation	Measured	0.0 mg/L / 0.14 mg/L / 0.20 mg/L / 0.36 mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NR (0.14-0.36 mg/L)	Reproductive/Teratogenic	Uninformative	813673
117-81-7	2 Day(s), (~9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0.2 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.2 ug/L)	ADME (biotransformation)	Uninformative	813673

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (48 Hour(s))	*Chironomus plumosus* (Midge), Larva, 3-4 Instar, Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	NR / NR	Physiology (Intoxication-Immobile, Response Site: Not reported)	EC50 (>18 mg/L)	Immobilization	Uninformative	813673
117-81-7	2 Day(s), (~9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0.2 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.2 ug/L)	ADME (biotransformation)	Uninformative	813673
117-81-7	48 Hour(s), (48 Hour(s))	*Chironomus plumosus* (Midge), Larva, 3-4 Instar, Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	NR / NR	Physiology (Intoxication-Immobile, Response Site: Not reported)	EC50 (>18 mg/L)	Immobilization	Uninformative	813673

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (~9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0.2 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.2 ug/L)	ADME (biotransformation)	Uninformative	813673
117-81-7	7 Day(s), (~9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0.2 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.2 ug/L)	ADME (biotransformation)	Uninformative	813673
117-81-7	9 Day(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0.2 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	NR (0.2 ug/L)	ADME (biotransformation)	Uninformative	813673

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	9 Day(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0.2 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	NR (0.2 ug/L)	ADME (biotransformation)	Uninformative	813673
117-81-7	20 Day(s), (2 Generation)	*Chironomus plumosus* (Midge), Pupa (Measured in: Parent, 1st generation), Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Parent, 1st generation	Measured	0.0 mg/L / 0.14 mg/L / 0.20 mg/L / 0.36 mg/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (0.36 mg/L)	Development/Growth	Medium	813673
117-81-7	20 Day(s), (35 Day(s))	*Chironomus plumosus* (Midge), Pupa, Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0.0 mg/L / 0.11 mg/L / 0.20 mg/L / 0.24 mg/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (0.24 mg/L)	Development/Growth	Medium	813673

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	20 Day(s), (2 Generation)	*Chironomus plumosus* (Midge), Pupa (Measured in: Parent, 1st generation), Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Parent, 1st generation	Measured	0.0 mg/L / 0.14 mg/L / 0.20 mg/L / 0.36 mg/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (0.36 mg/L)	Development/Growth	Medium	813673
117-81-7	20 Day(s), (35 Day(s))	*Chironomus plumosus* (Midge), Pupa, Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0.0 mg/L / 0.11 mg/L / 0.20 mg/L / 0.24 mg/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (0.24 mg/L)	Development/Growth	Medium	813673
117-81-7	25 Day(s), (35 Day(s))	*Chironomus plumosus* (Midge), Pupa, Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0.0 mg/L / 0.11 mg/L / 0.20 mg/L / 0.24 mg/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (0.24 mg/L)	Development/Growth	Medium	813673

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	25 Day(s), (2 Generation)	*Chironomus plumosus* (Midge), Pupa (Measured in: Parent, 1st generation), Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Parent, 1st generation	Measured	0.0 mg/L / 0.14 mg/L / 0.20 mg/L / 0.36 mg/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (0.36 mg/L)	Development/Growth	Medium	813673
117-81-7	25 Day(s), (2 Generation)	*Chironomus plumosus* (Midge), Pupa (Measured in: Parent, 1st generation), Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Parent, 1st generation	Measured	0.0 mg/L / 0.14 mg/L / 0.20 mg/L / 0.36 mg/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (0.36 mg/L)	Development/Growth	Medium	813673
117-81-7	25 Day(s), (35 Day(s))	*Chironomus plumosus* (Midge), Pupa, Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0.0 mg/L / 0.11 mg/L / 0.20 mg/L / 0.24 mg/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (0.24 mg/L)	Development/Growth	Medium	813673

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	30 Day(s), (35 Day(s))	*Chironomus plumosus* (Midge), Pupa, Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0.0 mg/L / 0.11 mg/L / 0.20 mg/L / 0.24 mg/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (0.24 mg/L)	Development/Growth	Medium	813673
117-81-7	30 Day(s), (2 Generation)	*Chironomus plumosus* (Midge), Pupa (Measured in: Parent, 1st generation), Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Parent, 1st generation	Measured	0.0 mg/L / 0.14 mg/L / 0.20 mg/L / 0.36 mg/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (0.36 mg/L)	Development/Growth	Medium	813673
117-81-7	30 Day(s), (2 Generation)	*Chironomus plumosus* (Midge), Pupa (Measured in: Parent, 1st generation), Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Parent, 1st generation	Measured	0.0 mg/L / 0.14 mg/L / 0.20 mg/L / 0.36 mg/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (0.36 mg/L)	Development/Growth	Medium	813673

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	30 Day(s), (35 Day(s))	*Chironomus plumosus* (Midge), Pupa, Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0.0 mg/L / 0.11 mg/L / 0.20 mg/L / 0.24 mg/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (0.24 mg/L)	Development/Growth	Medium	813673
117-81-7	35 Day(s), (2 Generation)	*Chironomus plumosus* (Midge), Pupa (Measured in: Parent, 1st generation), Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Parent, 1st generation	Measured	0.0 mg/L / 0.14 mg/L / 0.20 mg/L / 0.36 mg/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (0.36 mg/L)	Development/Growth	Medium	813673
117-81-7	35 Day(s), (2 Generation)	*Chironomus plumosus* (Midge), Pupa (Measured in: Parent, 1st generation), Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Parent, 1st generation	Measured	0.0 mg/L / 0.14 mg/L / 0.20 mg/L / 0.36 mg/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (0.36 mg/L)	Development/Growth	Medium	813673

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	35 Day(s), (35 Day(s))	*Chironomus plumosus* (Midge), Pupa, Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0.0 mg/L / 0.11 mg/L / 0.20 mg/L / 0.24 mg/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (0.24 mg/L)	Development/Growth	Medium	813673
117-81-7	35 Day(s), (35 Day(s))	*Chironomus plumosus* (Midge), Pupa, Not Reported, Laboratory (COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY, COLUMBIA, MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0.0 mg/L / 0.11 mg/L / 0.20 mg/L / 0.24 mg/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (0.24 mg/L)	Development/Growth	Medium	813673
117-81-7	NA Larva to adult, (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	NR (202 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	NA Larva to adult, (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	NR (202 ng/L)	ADME (biotransformation)	High	1332972

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	1 Hour(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (202 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	1 Hour(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (202 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	3 Hour(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (202 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	3 Hour(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (202 ng/L)	ADME (biotransformation)	High	1332972

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Hour(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (202 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	7 Hour(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (202 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	24 Hour(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (202 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	24 Hour(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (202 ng/L)	ADME (biotransformation)	High	1332972

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (48 Hour(s))	*Chironomus plumosus* (Midge), Larva, 3-4 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>18 mg/L)	Mortality	Medium	1332972
117-81-7	48 Hour(s), (48 Hour(s))	*Chironomus plumosus* (Midge), Larva, 96 Hour(s), Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>18 mg/L)	Mortality	Medium	1332972
117-81-7	48 Hour(s), (48 Hour(s))	*Chironomus plumosus* (Midge), Larva, 3-4 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>18 mg/L)	Mortality	Medium	1332972
117-81-7	48 Hour(s), (48 Hour(s))	*Chironomus plumosus* (Midge), Larva, 96 Hour(s), Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>18 mg/L)	Mortality	Medium	1332972

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	72 Hour(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (202 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	72 Hour(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (202 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	96 Hour(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (202 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	4 Day(s), (8 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 267 ng/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	BCF (267 ng/L)	ADME (biotransformation)	High	1332972

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	96 Hour(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (202 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	4 Day(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	NR (202 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	4 Day(s), (8 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 267 ng/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	BCF (267 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	4 Day(s), (8 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 267 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (267 ng/L)	ADME (biotransformation)	High	1332972

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	4 Day(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	NR (202 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	4 Day(s), (8 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 267 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (267 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	120 Hour(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (202 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	120 Hour(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (202 ng/L)	ADME (biotransformation)	High	1332972

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	144 Hour(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (202 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	144 Hour(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (202 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	192 Hour(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (202 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	8 Day(s), (8 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 267 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (267 ng/L)	ADME (biotransformation)	High	1332972

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	192 Hour(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (202 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	8 Day(s), (8 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 267 ng/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	BCF (267 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	8 Day(s), (8 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 267 ng/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	BCF (267 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	8 Day(s), (8 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 267 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (267 ng/L)	ADME (biotransformation)	High	1332972

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	216 Hour(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (202 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	216 Hour(s), (9 Day(s))	*Chironomus plumosus* (Midge), Larva, 3 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ng/L / 202 ng/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (202 ng/L)	ADME (biotransformation)	High	1332972
117-81-7	20 Day(s), (2 Generation)	*Chironomus plumosus* (Midge), Larva, 1 Instar (Measured in: F1 generation), Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F1 generation	Measured	0 ug/L / 169 ug/L / 296 ug/L / 552 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (552 ug/L)	Mortality	Medium	1332972
117-81-7	20 Day(s), (2 Generation)	*Chironomus plumosus* (Midge), Larva, 1 Instar (Measured in: F1 generation), Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F1 generation	Measured	0 ug/L / 169 ug/L / 296 ug/L / 552 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (552 ug/L)	Mortality	Medium	1332972

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	22 Day(s), (22 Day(s))	*Chironomus plumosus* (Midge), Not reported, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Measured	0 ug/L / 139 ug/L / 199 ug/L / 362 ug/L	Mortality (Mortality-Hatch, Response Site: Not reported)	NR (139-362 ug/L)	Mortality	Medium	1332972
117-81-7	22 Day(s), (22 Day(s))	*Chironomus plumosus* (Midge), Not reported, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Measured	0 ug/L / 139 ug/L / 199 ug/L / 362 ug/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NR (139-362 ug/L)	Reproductive/Teratogenic	High	1332972
117-81-7	22 Day(s), (22 Day(s))	*Chironomus plumosus* (Midge), Not reported, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Measured	0 ug/L / 139 ug/L / 199 ug/L / 362 ug/L	Mortality (Mortality-Hatch, Response Site: Not reported)	NR (139-362 ug/L)	Reproductive/Teratogenic	High	1332972
117-81-7	22 Day(s), (22 Day(s))	*Chironomus plumosus* (Midge), Not reported, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Measured	0 ug/L / 89 ug/L / 144 ug/L	Mortality (Mortality-Hatch, Response Site: Not reported)	NR (89-144 ug/L)	Mortality	Medium	1332972

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	22 Day(s), (22 Day(s))	*Chironomus plumosus* (Midge), Not reported, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Measured	0 ug/L / 89 ug/L / 144 ug/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NR (89-144 ug/L)	Reproductive/Teratogenic	High	1332972
117-81-7	22 Day(s), (22 Day(s))	*Chironomus plumosus* (Midge), Not reported, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Measured	0 ug/L / 139 ug/L / 199 ug/L / 362 ug/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NR (139-362 ug/L)	Reproductive/Teratogenic	High	1332972
117-81-7	22 Day(s), (22 Day(s))	*Chironomus plumosus* (Midge), Not reported, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Measured	0 ug/L / 89 ug/L / 144 ug/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NR (89-144 ug/L)	Reproductive/Teratogenic	High	1332972
117-81-7	22 Day(s), (22 Day(s))	*Chironomus plumosus* (Midge), Not reported, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Measured	0 ug/L / 89 ug/L / 144 ug/L	Mortality (Mortality-Hatch, Response Site: Not reported)	NR (89-144 ug/L)	Reproductive/Teratogenic	High	1332972

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	25 Day(s), (2 Generation)	*Chironomus plumosus* (Midge), Larva, 1 Instar (Measured in: F1 generation), Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F1 generation	Measured	0 ug/L / 169 ug/L / 296 ug/L / 552 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (552 ug/L)	Mortality	Medium	1332972
117-81-7	25 Day(s), (2 Generation)	*Chironomus plumosus* (Midge), Larva, 1 Instar (Measured in: F1 generation), Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F1 generation	Measured	0 ug/L / 169 ug/L / 296 ug/L / 552 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (552 ug/L)	Mortality	Medium	1332972
117-81-7	30 Day(s), (2 Generation)	*Chironomus plumosus* (Midge), Larva, 1 Instar (Measured in: F1 generation), Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F1 generation	Measured	0 ug/L / 169 ug/L / 296 ug/L / 552 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (552 ug/L)	Mortality	Medium	1332972

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	30 Day(s), (2 Generation)	*Chironomus plumosus* (Midge), Larva, 1 Instar (Measured in: F1 generation), Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F1 generation	Measured	0 ug/L / 169 ug/L / 296 ug/L / 552 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (552 ug/L)	Mortality	Medium	1332972
117-81-7	35 Day(s), (2 Generation)	*Chironomus plumosus* (Midge), Larva, 1 Instar (Measured in: F1 generation), Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F1 generation	Measured	0 ug/L / 169 ug/L / 296 ug/L / 552 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (552 ug/L)	Mortality	Medium	1332972
117-81-7	35 Day(s), (2 Generation)	*Chironomus plumosus* (Midge), Larva, 1 Instar (Measured in: F1 generation), Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F1 generation	Measured	0 ug/L / 169 ug/L / 296 ug/L / 552 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (552 ug/L)	Mortality	Medium	1332972

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	40 Day(s), (40 Day(s))	*Chironomus plumosus* (Midge), Larva, 1 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, 100 Organism	Measured	0 ug/L / 109 ug/L / 196 ug/L / 240 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (240 ug/L)	Mortality	Medium	1332972
117-81-7	40 Day(s), (2 Generation)	*Chironomus plumosus* (Midge), Larva, 1 Instar (Measured in: F1 generation), Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F1 generation	Measured	0 ug/L / 169 ug/L / 296 ug/L / 552 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (552 ug/L)	Mortality	Medium	1332972
117-81-7	40 Day(s), (40 Day(s))	*Chironomus plumosus* (Midge), Larva, 1 Instar, Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, 100 Organism	Measured	0 ug/L / 109 ug/L / 196 ug/L / 240 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (240 ug/L)	Mortality	Medium	1332972
117-81-7	40 Day(s), (2 Generation)	*Chironomus plumosus* (Midge), Larva, 1 Instar (Measured in: F1 generation), Not Reported, Laboratory (CULTURES MAINTAINED AT THE CNFRL, COLUMBIA, MO)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F1 generation	Measured	0 ug/L / 169 ug/L / 296 ug/L / 552 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (552 ug/L)	Mortality	Medium	1332972

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	18.9 (18.6-19.3) Day(s), (28 Day(s))	*Chironomus riparius* (Midge), Larva, <24 Hours post hatch (Measured in: Adult), Not Reported, Laboratory (DERIVED FROM CONTINUOUS LABORATORY CULTURES)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Adult	Unmeasured	0 mg/kg dw sediment / 0 mg/kg dw sediment / 100 mg/kg dw sediment / 1000 mg/kg dw sediment / 10000 mg/kg dw sediment	Growth (Development-Emergence, Response Site: Not reported)	ET50 (10000 mg/kg dw sediment)	Development/Growth	High	1334624
117-81-7	19.2 (18.9-19.5) Day(s), (28 Day(s))	*Chironomus riparius* (Midge), Larva, <24 Hours post hatch (Measured in: Adult), Not Reported, Laboratory (DERIVED FROM CONTINUOUS LABORATORY CULTURES)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Adult	Unmeasured	0 mg/kg dw sediment / 0 mg/kg dw sediment / 100 mg/kg dw sediment / 1000 mg/kg dw sediment / 10000 mg/kg dw sediment	Growth (Development-Emergence, Response Site: Not reported)	ET50 (100 mg/kg dw sediment)	Development/Growth	High	1334624
117-81-7	19.2 (18.8-19.6) Day(s), (28 Day(s))	*Chironomus riparius* (Midge), Larva, <24 Hours post hatch (Measured in: Adult), Not Reported, Laboratory (DERIVED FROM CONTINUOUS LABORATORY CULTURES)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Adult	Unmeasured	0 mg/kg dw sediment / 0 mg/kg dw sediment / 100 mg/kg dw sediment / 1000 mg/kg dw sediment / 10000 mg/kg dw sediment	Growth (Development-Emergence, Response Site: Not reported)	ET50 (1000 mg/kg dw sediment)	Development/Growth	High	1334624
117-81-7	19-23 Day(s), (28 Day(s))	*Chironomus riparius* (Midge), Larva, <24 Hours post hatch (Measured in: Adult), Not Reported, Laboratory (DERIVED FROM CONTINUOUS LABORATORY CULTURES)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Adult	Unmeasured	0 mg/kg dw sediment / 0 mg/kg dw sediment / 100 mg/kg dw sediment / 1000 mg/kg dw sediment / 10000 mg/kg dw sediment	Accumulation (Accumulation-Residue, Response Site: Not reported)	BAF (100-10000 mg/kg dw sediment)	ADME (biotransformation)	High	1334624

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	28 Day(s), (28 Day(s))	*Chironomus riparius* (Midge), Larva, <24 Hours post hatch (Measured in: Adult), Not Reported, Laboratory (DERIVED FROM CONTINUOUS LABORATORY CULTURES)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Adult	Unmeasured	0 mg/kg dw sediment / 0 mg/kg dw sediment / 100 mg/kg dw sediment / 1000 mg/kg dw sediment / 10000 mg/kg dw sediment	Population (Population-Sex ratio, Response Site: Not reported)	NOEC (10000 mg/kg dw sediment)	Reproductive/Teratogenic	High	1334624
117-81-7	28 Day(s), (28 Day(s))	*Chironomus riparius* (Midge), Larva, <24 Hours post hatch (Measured in: Adult), Not Reported, Laboratory (DERIVED FROM CONTINUOUS LABORATORY CULTURES)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Adult	Unmeasured	0 mg/kg dw sediment / 0 mg/kg dw sediment / 100 mg/kg dw sediment / 1000 mg/kg dw sediment / 10000 mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (10000 mg/kg dw sediment)	Mortality	Uninformative	1334624
117-81-7	28 Day(s), (28 Day(s))	*Chironomus riparius* (Midge), Larva, <24 Hours post hatch (Measured in: Adult), Not Reported, Laboratory (DERIVED FROM CONTINUOUS LABORATORY CULTURES)	Fresh water, Aqueous (aquatic habitat), Sediment, NA Adult	Unmeasured	0 mg/kg dw sediment / 0 mg/kg dw sediment / 100 mg/kg dw sediment / 1000 mg/kg dw sediment / 10000 mg/kg dw sediment	Growth (Development-Emergence, Response Site: Not reported)	NOEC (10000 mg/kg dw sediment)	Development/Growth	High	1334624
117-81-7	24 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Heat Shock Protein 27 mRNA, Response Site: Not reported)	NR (0.001-1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Ecdysone receptor mRNA, Response Site: Not reported)	NOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	24 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-60S ribosomal protein L13 mRNA, Response Site: Not reported)	NOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	24 Hour(s), (24 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L / 10 ug/L / 100 ug/L / 1000 ug/L / 10000 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NR (0.001-10000 ug/L)	Mortality	Uninformative	3859131
117-81-7	24 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Heat shock protein 40 mRNA, Response Site: Not reported)	NOEC (0.1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	24 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Heat shock protein 40 mRNA, Response Site: Not reported)	LOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Cytochrome p450 family 4 subfamily G mRNA, Response Site: Not reported)	LOEC (0.001 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	24 Hour(s), (48 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 1 ug/L / 1000 ug/L	Biochemical (Enzyme(s)-Glutathione S-transferase, Response Site: Not reported)	NOEC (1000 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	24 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Glyceraldehyde 3-phosphate dehydrogenase (GAPDH) mRNA, Response Site: Not reported)	NOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	24 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Ribosomal protein L4 mRNA, Response Site: Not reported)	NOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	24 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Heat shock cognate protein 70 mRNA, Response Site: Not reported)	NOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-HSP70 mRNA, Response Site: Not reported)	NOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	48 Hour(s), (48 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 1 ug/L / 1000 ug/L	Biochemical (Enzyme(s)-Glutathione S-transferase, Response Site: Not reported)	NOEC (1000 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	48 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Heat shock protein 40 mRNA, Response Site: Not reported)	LOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	48 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Heat shock protein 40 mRNA, Response Site: Not reported)	NOEC (0.1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	48 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Heat Shock Protein 27 mRNA, Response Site: Not reported)	NOEC (0.1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Cytochrome p450 family 4 subfamily G mRNA, Response Site: Not reported)	LOEC (0.001 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	48 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Ecdysone receptor mRNA, Response Site: Not reported)	LOEC (0.001 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	48 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Heat Shock Protein 27 mRNA, Response Site: Not reported)	LOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	48 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Glyceraldehyde 3-phosphate dehydrogenase (GAPDH) mRNA, Response Site: Not reported)	NOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	48 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-60S ribosomal protein L13 mRNA, Response Site: Not reported)	NR (0.001-1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-HSP70 mRNA, Response Site: Not reported)	NR (0.001-1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	48 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Heat shock cognate protein 70 mRNA, Response Site: Not reported)	NOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	48 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Ribosomal protein L4 mRNA, Response Site: Not reported)	NOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	72 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Cytochrome p450 family 4 subfamily G mRNA, Response Site: Not reported)	NR (0.001-1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	72 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Glyceraldehyde 3-phosphate dehydrogenase (GAPDH) mRNA, Response Site: Not reported)	NR (0.001-1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	72 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-60S ribosomal protein L13 mRNA, Response Site: Not reported)	NOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	72 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-HSP70 mRNA, Response Site: Not reported)	LOEC (0.001 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	72 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Ecdysone receptor mRNA, Response Site: Not reported)	LOEC (0.001 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	96 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-60S ribosomal protein L13 mRNA, Response Site: Not reported)	NOEC (0.1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	96 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-HSP70 mRNA, Response Site: Not reported)	LOEC (0.001 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	96 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Glyceraldehyde 3-phosphate dehydrogenase (GAPDH) mRNA, Response Site: Not reported)	LOEC (0.001 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	48-96 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NR (0.001-1 ug/L)	Mortality	Uninformative	3859131
117-81-7	96 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Ecdysone receptor mRNA, Response Site: Not reported)	LOEC (0.001 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	96 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-Cytochrome p450 family 4 subfamily G mRNA, Response Site: Not reported)	LOEC (0.001 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131
117-81-7	96 Hour(s), (96 Hour(s))	*Chironomus riparius* (Midge), Larva, 4 Instar, Not Reported, Laboratory (STANDARD LABORATORY CULTURE)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.001 ug/L / 0.01 ug/L / 0.1 ug/L / 1 ug/L	Cellular (Genetics-60S ribosomal protein L13 mRNA, Response Site: Not reported)	LOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity	Medium	3859131

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	>30 Day(s), (>30 Day(s))	*Chironomus riparius* (Midge), Egg, <=24 Hour(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEC (0.1 mg/L)	Reproductive/Teratogenic	Medium	681990
117-81-7	>30 Day(s), (>30 Day(s))	*Chironomus riparius* (Midge), Egg, <=24 Hour(s) (Measured in: F1 generation), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA F1 generation	Unmeasured	0 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L	Population (Population-Sex ratio, Response Site: Not reported)	LOEC (0.05 mg/L)	Reproductive/Teratogenic	Medium	681990
117-81-7	>30 Day(s), (>30 Day(s))	*Chironomus riparius* (Midge), Egg, <=24 Hour(s) (Measured in: F1 generation), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA F1 generation	Unmeasured	0 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L	Population (Population-Sex ratio, Response Site: Not reported)	NOEC (0.01 mg/L)	Reproductive/Teratogenic	Medium	681990
117-81-7	>30 Day(s), (>30 Day(s))	*Chironomus riparius* (Midge), Egg, <=24 Hour(s) (Measured in: F1 generation), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA F1 generation	Unmeasured	0 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L	Reproduction (Reproduction-Viability, Response Site: Not reported)	LOEC (0.01 mg/L)	Reproductive/Teratogenic	Medium	681990
117-81-7	>30 Day(s), (>30 Day(s))	*Chironomus riparius* (Midge), Egg, <=24 Hour(s) (Measured in: F1 generation), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA F1 generation	Unmeasured	0 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (0.1 mg/L)	Development/Growth	Medium	681990
117-81-7	>30 Day(s), (>30 Day(s))	*Chironomus riparius* (Midge), Egg, <=24 Hour(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA female, 1st generation	Unmeasured	0 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (0.1 mg/L)	Development/Growth	Medium	681990

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	>30 Day(s), (>30 Day(s))	*Chironomus riparius* (Midge), Egg, <=24 Hour(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, NA male, 1st generation	Unmeasured	0 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (0.1 mg/L)	Development/Growth	Medium	681990
117-81-7	>30 Day(s), (>30 Day(s))	*Chironomus riparius* (Midge), Egg, <=24 Hour(s), Both, Not reported	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (0.1 mg/L)	Reproductive/Teratogenic	Medium	681990
117-81-7	<=33 Day(s), (<=33 Day(s))	*Chironomus riparius* (Midge), Larva, 11 Day(s), Both (Measured in: Male organisms), Laboratory	Fresh water, Aqueous (aquatic habitat), Static, 50 Male organisms	Unmeasured	0 ug/L / 0 ug/L / 0.3 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Growth (Morphology-Width, Response Site: Head)	NOEC (30 ug/L)	Development/Growth	High	681634
117-81-7	<=33 Day(s), (<=33 Day(s))	*Chironomus riparius* (Midge), Larva, 11 Day(s), Both (Measured in: Male organisms), Laboratory	Fresh water, Aqueous (aquatic habitat), Static, 50 Male organisms	Unmeasured	0 ug/L / 0 ug/L / 0.3 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Growth (Morphology-Length, Response Site: Head)	NOEC (30 ug/L)	Development/Growth	High	681634
117-81-7	<=33 Day(s), (<=33 Day(s))	*Chironomus riparius* (Midge), Larva, 11 Day(s), Both (Measured in: Male organisms), Laboratory	Fresh water, Aqueous (aquatic habitat), Static, 50 Male organisms	Unmeasured	0 ug/L / 0 ug/L / 0.3 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Growth (Growth-Width, Response Site: Whole organism)	NOEC (30 ug/L)	Development/Growth	High	681634
117-81-7	<=33 Day(s), (<=33 Day(s))	*Chironomus riparius* (Midge), Larva, 11 Day(s), Both (Measured in: Female organisms), Laboratory	Fresh water, Aqueous (aquatic habitat), Static, 50 Female organisms	Unmeasured	0 ug/L / 0 ug/L / 0.3 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Growth (Morphology-Width, Response Site: Head)	NOEC (30 ug/L)	Development/Growth	High	681634

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	<=33 Day(s), (<=33 Day(s))	*Chironomus riparius* (Midge), Larva, 11 Day(s) (Measured in: Male, multiple generations), Both (Measured in: Male, multiple generations), Laboratory	Fresh water, Aqueous (aquatic habitat), Static, NA Male, multiple generations	Unmeasured	0 ug/L / 0 ug/L / 0.3 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NR (0.3-30 ug/L)	Development/Growth	High	681634
117-81-7	<=33 Day(s), (<=33 Day(s))	*Chironomus riparius* (Midge), Larva, 11 Day(s), Both (Measured in: Female organisms), Laboratory	Fresh water, Aqueous (aquatic habitat), Static, 50 Female organisms	Unmeasured	0 ug/L / 0 ug/L / 0.3 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (30 ug/L)	Development/Growth	High	681634
117-81-7	<=33 Day(s), (<=33 Day(s))	*Chironomus riparius* (Midge), Larva, 11 Day(s), Both (Measured in: Female organisms), Laboratory	Fresh water, Aqueous (aquatic habitat), Static, 50 Female organisms	Unmeasured	0 ug/L / 0 ug/L / 0.3 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Growth (Growth-Width, Response Site: Whole organism)	NOEC (30 ug/L)	Development/Growth	High	681634
117-81-7	<=33 Day(s), (<=33 Day(s))	*Chironomus riparius* (Midge), Larva, 11 Day(s), Both, Laboratory	Fresh water, Aqueous (aquatic habitat), Static, NA Both male and female	Unmeasured	0 ug/L / 0 ug/L / 0.3 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Population (Population-Sex ratio, Response Site: Not reported)	NR (0.3-30 ug/L)	Reproductive/Teratogenic	High	681634
117-81-7	<=33 Day(s), (<=33 Day(s))	*Chironomus riparius* (Midge), Larva, 11 Day(s) (Measured in: Male, multiple generations), Both (Measured in: Male, multiple generations), Laboratory	Fresh water, Aqueous (aquatic habitat), Static, NA Male, multiple generations	Unmeasured	0 ug/L / 0 ug/L / 0.3 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (0.3-30 ug/L)	Mortality	High	681634
117-81-7	<=33 Day(s), (<=33 Day(s))	*Chironomus riparius* (Midge), Larva, 11 Day(s), Both (Measured in: Male organisms), Laboratory	Fresh water, Aqueous (aquatic habitat), Static, 50 Male organisms	Unmeasured	0 ug/L / 0 ug/L / 0.3 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Growth (Growth-Volume, Response Site: Whole organism)	LOEC (0.3 ug/L)	Development/Growth	High	681634

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	<=33 Day(s), (<=33 Day(s))	*Chironomus riparius* (Midge), Larva, 11 Day(s), Both (Measured in: Female organisms), Laboratory	Fresh water, Aqueous (aquatic habitat), Static, 50 Female organisms	Unmeasured	0 ug/L / 0 ug/L / 0.3 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Growth (Growth-Volume, Response Site: Whole organism)	LOEC (0.3 ug/L)	Development/Growth	High	681634
117-81-7	<=33 Day(s), (<=33 Day(s))	*Chironomus riparius* (Midge), Larva, 11 Day(s), Both (Measured in: Female organisms), Laboratory	Fresh water, Aqueous (aquatic habitat), Static, 50 Female organisms	Unmeasured	0 ug/L / 0 ug/L / 0.3 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Growth (Morphology-Length, Response Site: Head)	NOEC (30 ug/L)	Development/Growth	High	681634
117-81-7	<=33 Day(s), (<=33 Day(s))	*Chironomus riparius* (Midge), Larva, 11 Day(s), Both (Measured in: Male organisms), Laboratory	Fresh water, Aqueous (aquatic habitat), Static, 50 Male organisms	Unmeasured	0 ug/L / 0 ug/L / 0.3 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (30 ug/L)	Development/Growth	High	681634
117-81-7	24 Hour(s), (24 Hour(s))	*Chironomus riparius* (Midge), Larva, 11-13 Days post-hatch, Not Reported, Laboratory (OBTAINED FROM LABORATORY-REARED ADULTS)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0.5 mg/L	Biochemical (Enzyme(s)-Glutathione peroxidase,Superoxide dismutase (SOD) enzyme activity, Response Site: Not reported)	NR (0.5 mg/L)	Mechanistic: Cell signaling/function; Oxidative stress (including redox biology)	Medium	2519014
117-81-7	24 Hour(s), (24 Hour(s))	*Chironomus riparius* (Midge), Larva, 11-13 Days post-hatch, Not Reported, Laboratory (OBTAINED FROM LABORATORY-REARED ADULTS)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0.5 mg/L	Cellular (Genetics-Catalase mRNA,Ecdysone receptor mRNA,Estrogen related receptor mRNA,Peroxidase mRNA,Ultraspiracle mRNA, Response Site: Not reported)	NR (0.5 mg/L)	Mechanistic: Cell signaling/function; Oxidative stress (including redox biology)	Medium	2519014

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	27 Day(s), (27 Day(s))	*Chironomus sp.* (Midge), Not reported, Not Reported, Wild (UNPOLLUTED STREAMS IN SOUTH SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	~0.001-1.43 mg/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	BAF (~0.001-1.43 mg/L)	ADME (biotransformation)	Uninformative	59542
117-81-7	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Leaching , Not Reported	Measured	<0.067 mg/L / 0.382 (0.225-0.780) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NR (0.382 (0.225-0.780) mg/L)	Mortality	High	679311
117-81-7	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	<0.360 mg/kg dw sediment / 3070 (2690-3240) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	NR (3070 (2690-3240) mg/kg dw sediment)	Development/Growth	High	679311
117-81-7	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	<0.360 mg/kg dw sediment / 3070 (2690-3240) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NR (3070 (2690-3240) mg/kg dw sediment)	Mortality	High	679311
117-81-7	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	<0.360 mg/kg dw sediment / 3070 (2690-3240) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NR (3070 (2690-3240) mg/kg dw sediment)	Mortality	High	679311
117-81-7	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	<0.360 mg/kg dw sediment / 3070 (2690-3240) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	NR (3070 (2690-3240) mg/kg dw sediment)	Development/Growth	High	679311
117-81-7	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Leaching , Not Reported	Measured	<0.067 mg/L / 0.382 (0.225-0.780) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NR (0.382 (0.225-0.780) mg/L)	Development/Growth	High	679311
117-81-7	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Leaching , Not Reported	Measured	<0.067 mg/L / 0.382 (0.225-0.780) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NR (0.382 (0.225-0.780) mg/L)	Mortality	High	679311

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Leaching , Not Reported	Measured	<0.067 mg/L / 0.382 (0.225-0.780) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NR (0.382 (0.225-0.780) mg/L)	Development/Growth	High	679311
117-81-7	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), 9-11 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.0102 mg/L / 0.0477 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (0.0477 mg/L)	Mortality	High	679312
117-81-7	24 Hour(s), (48 Hour(s))	*Chironomus tentans* (Midge), Larva, 4 Instar, Not Reported, Laboratory (ORIGINAL STRAIN PROVIDED BY THE KOREA INSTITUTE OF TOXICOLOGY IN DAEJEON, KOREA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.5 ug/L / 5 ug/L / 50 ug/L	Cellular (Genetics-Hemoglobin subunit beta mRNA, Response Site: Whole organism)	NR (0.5-50 ug/L)	Mechanistic: Cell signaling/function	Medium	492760
117-81-7	24 Hour(s), (48 Hour(s))	*Chironomus tentans* (Midge), Larva, 4 Instar, Not Reported, Laboratory (ORIGINAL STRAIN PROVIDED BY THE KOREA INSTITUTE OF TOXICOLOGY IN DAEJEON, KOREA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.5 ug/L / 5 ug/L / 50 ug/L	Cellular (Genetics-Heat shock cognate protein 70 mRNA, Response Site: Whole organism)	NR (0.5-50 ug/L)	Mechanistic: Cell signaling/function	Medium	492760

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117-81-7	24 Hour(s), (48 Hour(s))	*Chironomus tentans* (Midge), Larva, 4 Instar, Not Reported, Laboratory (ORIGINAL STRAIN PROVIDED BY THE KOREA INSTITUTE OF TOXICOLOGY IN DAEJEON, KOREA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.5 ug/L / 5 ug/L / 50 ug/L	Cellular (Genetics-Hemoglobin subunit alphaÂ mRNA, Response Site: Whole organism)	NR (0.5-50 ug/L)	Mechanistic: Cell signaling/function	Medium	492760
117-81-7	24 Hour(s), (48 Hour(s))	*Chironomus tentans* (Midge), Larva, 4 Instar, Not Reported, Laboratory (ORIGINAL STRAIN PROVIDED BY THE KOREA INSTITUTE OF TOXICOLOGY IN DAEJEON, KOREA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.5 ug/L / 5 ug/L / 50 ug/L	Cellular (Genetics-HSP70 mRNA, Response Site: Whole organism)	LOEC (0.5 ug/L)	Mechanistic: Cell signaling/function	Medium	492760
117-81-7	48 Hour(s), (48 Hour(s))	*Chironomus tentans* (Midge), Larva, 4 Instar, Not Reported, Laboratory (ORIGINAL STRAIN PROVIDED BY THE KOREA INSTITUTE OF TOXICOLOGY IN DAEJEON, KOREA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.5 ug/L / 5 ug/L / 50 ug/L	Growth (Growth-Biomass, Response Site: Whole organism)	NOEC (50 ug/L)	Development/Growth	Medium	492760

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (48 Hour(s))	*Chironomus tentans* (Midge), Larva, 4 Instar, Not Reported, Laboratory (ORIGINAL STRAIN PROVIDED BY THE KOREA INSTITUTE OF TOXICOLOGY IN DAEJEON, KOREA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ug/L / 0.5 ug/L / 5 ug/L / 50 ug/L	Growth (Growth-Biomass, Response Site: Whole organism)	NR (0.5-50 ug/L)	Development/Growth	Medium	492760
117-81-7	24 Hour(s), (48 Hour(s))	*Chironomus tentans* (Midge), Larva, 10-14 Day(s), Not Reported, Laboratory (MIC AQUATIC LABORATORY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 10 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>10 mg/L)	Mortality	Medium	1335360
117-81-7	24-48 Hour(s), (48 Hour(s))	*Chironomus tentans* (Midge), Larva, 10-14 Day(s), Not Reported, Laboratory (MIC AQUATIC LABORATORY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 10 mg/L	Physiology (Intoxication-Immobile, Response Site: Not reported)	NR (10 mg/L)	Immobilization	Medium	1335360
117-81-7	48 Hour(s), (48 Hour(s))	*Chironomus tentans* (Midge), Larva, 10-14 Day(s), Not Reported, Laboratory (MIC AQUATIC LABORATORY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 10 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>10 mg/L)	Mortality	Medium	1335360

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (48 Hour(s))	*Chironomus tentans* (Midge), Larva, 10-14 Day(s), Not Reported, Laboratory (MIC AQUATIC LABORATORY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 10 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (>10 mg/L)	Mortality	Medium	1335360
117-81-7	24 Hour(s), (24 Hour(s))	*Chironomus tentans* (Midge), Larva, 4 Instar, Not Reported, Laboratory (FROM KOREA INSTITUTE OF TOXICOLOGY, DAEJEON, KOREA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC90 (12078 uM)	Mortality	Low	674438
117-81-7	24 Hour(s), (24 Hour(s))	*Chironomus tentans* (Midge), Larva, 4 Instar, Not Reported, Laboratory (FROM KOREA INSTITUTE OF TOXICOLOGY, DAEJEON, KOREA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (1124 (387-3503) uM)	Mortality	Low	674438
117-81-7	24 Hour(s), (24 Hour(s))	*Chironomus tentans* (Midge), Larva, 4 Instar, Not Reported, Laboratory (FROM KOREA INSTITUTE OF TOXICOLOGY, DAEJEON, KOREA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC10 (104 (0-329) uM)	Mortality	Low	674438
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <=24 Hour(s), Not Reported, Not reported (NR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	NR / NR	Physiology (Intoxication-Immobile, Response Site: Not reported)	EC50 (>0.16 mg/L)	Immobilization	High	1321996

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Adult, <=24 Hour(s), Not Reported, Laboratory (OBTAINED FROM LABORATORY STOCKS CULTURED AT SPRINGBORN BIONOMICS, INC.)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.0010-0.029 mg/L / 0.026 (0.016-0.042) mg/L / 0.045 (0.028-0.070) mg/L / 0.077 (0.055-0.10) mg/L / 0.16 (0.11-0.21) mg/L / 0.29 (0.23-0.32) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.29 (0.23-0.32) mg/L)	Mortality	High	1316195
117-81-7	8 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Adult, <=24 Hour(s), Not Reported, Laboratory (OBTAINED FROM LABORATORY STOCKS CULTURED AT SPRINGBORN BIONOMICS, INC.)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.0010-0.029 mg/L / 0.026 (0.016-0.042) mg/L / 0.045 (0.028-0.070) mg/L / 0.077 (0.055-0.10) mg/L / 0.16 (0.11-0.21) mg/L / 0.29 (0.23-0.32) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (0.29 (0.23-0.32) mg/L)	Reproductive/Teratogenic	High	1316195
117-81-7	9 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Adult, <=24 Hour(s), Not Reported, Laboratory (OBTAINED FROM LABORATORY STOCKS CULTURED AT SPRINGBORN BIONOMICS, INC.)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.0010-0.029 mg/L / 0.026 (0.016-0.042) mg/L / 0.045 (0.028-0.070) mg/L / 0.077 (0.055-0.10) mg/L / 0.16 (0.11-0.21) mg/L / 0.29 (0.23-0.32) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (0.29 (0.23-0.32) mg/L)	Reproductive/Teratogenic	High	1316195

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Adult, <=24 Hour(s), Not Reported, Laboratory (OBTAINED FROM LABORATORY STOCKS CULTURED AT SPRINGBORN BIONOMICS, INC.)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.0010-0.029 mg/L / 0.026 (0.016-0.042) mg/L / 0.045 (0.028-0.070) mg/L / 0.077 (0.055-0.10) mg/L / 0.16 (0.11-0.21) mg/L / 0.29 (0.23-0.32) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (0.29 (0.23-0.32) mg/L)	Reproductive/Teratogenic	High	1316195
117-81-7	11 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Adult, <=24 Hour(s), Not Reported, Laboratory (OBTAINED FROM LABORATORY STOCKS CULTURED AT SPRINGBORN BIONOMICS, INC.)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.0010-0.029 mg/L / 0.026 (0.016-0.042) mg/L / 0.045 (0.028-0.070) mg/L / 0.077 (0.055-0.10) mg/L / 0.16 (0.11-0.21) mg/L / 0.29 (0.23-0.32) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (0.29 (0.23-0.32) mg/L)	Reproductive/Teratogenic	High	1316195
117-81-7	14 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Adult, <=24 Hour(s), Not Reported, Laboratory (OBTAINED FROM LABORATORY STOCKS CULTURED AT SPRINGBORN BIONOMICS, INC.)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.0010-0.029 mg/L / 0.026 (0.016-0.042) mg/L / 0.045 (0.028-0.070) mg/L / 0.077 (0.055-0.10) mg/L / 0.16 (0.11-0.21) mg/L / 0.29 (0.23-0.32) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (0.29 (0.23-0.32) mg/L)	Reproductive/Teratogenic	High	1316195

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Adult, <=24 Hour(s), Not Reported, Laboratory (OBTAINED FROM LABORATORY STOCKS CULTURED AT SPRINGBORN BIONOMICS, INC.)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.0010-0.029 mg/L / 0.026 (0.016-0.042) mg/L / 0.045 (0.028-0.070) mg/L / 0.077 (0.055-0.10) mg/L / 0.16 (0.11-0.21) mg/L / 0.29 (0.23-0.32) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.077 (0.055-0.10) mg/L)	Mortality	High	1316195
117-81-7	14 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Adult, <=24 Hour(s), Not Reported, Laboratory (OBTAINED FROM LABORATORY STOCKS CULTURED AT SPRINGBORN BIONOMICS, INC.)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.0010-0.029 mg/L / 0.026 (0.016-0.042) mg/L / 0.045 (0.028-0.070) mg/L / 0.077 (0.055-0.10) mg/L / 0.16 (0.11-0.21) mg/L / 0.29 (0.23-0.32) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (0.16 (0.11-0.21) mg/L)	Mortality	High	1316195
117-81-7	15 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Adult, <=24 Hour(s), Not Reported, Laboratory (OBTAINED FROM LABORATORY STOCKS CULTURED AT SPRINGBORN BIONOMICS, INC.)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.0010-0.029 mg/L / 0.026 (0.016-0.042) mg/L / 0.045 (0.028-0.070) mg/L / 0.077 (0.055-0.10) mg/L / 0.16 (0.11-0.21) mg/L / 0.29 (0.23-0.32) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (0.29 (0.23-0.32) mg/L)	Reproductive/Teratogenic	High	1316195

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	16 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Adult, <=24 Hour(s), Not Reported, Laboratory (OBTAINED FROM LABORATORY STOCKS CULTURED AT SPRINGBORN BIONOMICS, INC.)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.0010-0.029 mg/L / 0.026 (0.016-0.042) mg/L / 0.045 (0.028-0.070) mg/L / 0.077 (0.055-0.10) mg/L / 0.16 (0.11-0.21) mg/L / 0.29 (0.23-0.32) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (0.29 (0.23-0.32) mg/L)	Reproductive/Teratogenic	High	1316195
117-81-7	17 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Adult, <=24 Hour(s), Not Reported, Laboratory (OBTAINED FROM LABORATORY STOCKS CULTURED AT SPRINGBORN BIONOMICS, INC.)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.0010-0.029 mg/L / 0.026 (0.016-0.042) mg/L / 0.045 (0.028-0.070) mg/L / 0.077 (0.055-0.10) mg/L / 0.16 (0.11-0.21) mg/L / 0.29 (0.23-0.32) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (0.29 (0.23-0.32) mg/L)	Reproductive/Teratogenic	High	1316195
117-81-7	18 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Adult, <=24 Hour(s), Not Reported, Laboratory (OBTAINED FROM LABORATORY STOCKS CULTURED AT SPRINGBORN BIONOMICS, INC.)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.0010-0.029 mg/L / 0.026 (0.016-0.042) mg/L / 0.045 (0.028-0.070) mg/L / 0.077 (0.055-0.10) mg/L / 0.16 (0.11-0.21) mg/L / 0.29 (0.23-0.32) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (0.29 (0.23-0.32) mg/L)	Reproductive/Teratogenic	High	1316195

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (EG&G BIONOMICS)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.0098 mg/L / 0.016-0.037 mg/L / 0.012-0.074 mg/L / 0.044-0.12 mg/L / 0.076-0.20 mg/L / 0.14-0.33 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.32 mg/L)	Mortality	Medium	1316223
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (EG&G BIONOMICS)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.0037 mg/L / 0.068-0.25 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.24 mg/L)	Mortality	Medium	1316223
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (EG&G BIONOMICS)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.0098 mg/L / 0.016-0.037 mg/L / 0.012-0.074 mg/L / 0.044-0.12 mg/L / 0.076-0.20 mg/L / 0.14-0.33 mg/L	Multiple (Multiple-Multiple effects reported as one result, Response Site: Not reported)	NOEC (<0.037 mg/L)	Mortality	Medium	1316223
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (EG&G BIONOMICS)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.0037 mg/L / 0.068-0.25 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (0.068-0.24 mg/L)	Mortality	Medium	1316223
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (EG&G BIONOMICS)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.0037 mg/L / 0.068-0.25 mg/L	Multiple (Multiple-Multiple effects reported as one result, Response Site: Not reported)	NOEC (<0.24 mg/L)	Mortality	Medium	1316223
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (EG&G BIONOMICS)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.0037 mg/L / 0.068-0.25 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (0.24 mg/L)	Mortality	Medium	1316223

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (EG&G BIONOMICS)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.0037 mg/L / 0.068-0.25 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.24 mg/L)	Mortality	Medium	1316223
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (EG&G BIONOMICS)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.0098 mg/L / 0.016-0.037 mg/L / 0.012-0.074 mg/L / 0.044-0.12 mg/L / 0.076-0.20 mg/L / 0.14-0.33 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (0.012-0.074 mg/L)	Mortality	Medium	1316223
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (EG&G BIONOMICS)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.0098 mg/L / 0.016-0.037 mg/L / 0.012-0.074 mg/L / 0.044-0.12 mg/L / 0.076-0.20 mg/L / 0.14-0.33 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (0.074 mg/L)	Mortality	Medium	1316223
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (EG&G BIONOMICS)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.0098 mg/L / 0.016-0.037 mg/L / 0.012-0.074 mg/L / 0.044-0.12 mg/L / 0.076-0.20 mg/L / 0.14-0.33 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.32 mg/L)	Mortality	Medium	1316223
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (CONTINUOUS LABORATORY CULTURES)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L	Physiology (Intoxication-Immobile, Response Site: Not reported)	NR (1 mg/L)	Mortality	Uninformative	679904

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), <24 Hour(s) (Measured in: F0 generation), Not Reported, Laboratory (CONTINUOUS LABORATORY CULTURES)	Fresh water, Aqueous (aquatic habitat), Renewal, NA F0 generation	Measured	0 mg/L / 0 mg/L / 0.19-0.25 mg/L / 0.78-1.0 mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (0.78-1.0 mg/L)	Reproductive/Teratogenic	High	679904
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), <24 Hour(s) (Measured in: F0 generation), Not Reported, Laboratory (CONTINUOUS LABORATORY CULTURES)	Fresh water, Aqueous (aquatic habitat), Renewal, NA F0 generation	Measured	0 mg/L / 0 mg/L / 0.19-0.25 mg/L / 0.78-1.0 mg/L	Growth (Growth-Length, Response Site: Whole organism)	NR (0.19-1.0 mg/L)	Development/Growth	High	679904
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), <24 Hour(s) (Measured in: F0 generation), Not Reported, Laboratory (CONTINUOUS LABORATORY CULTURES)	Fresh water, Aqueous (aquatic habitat), Renewal, NA F0 generation	Measured	0 mg/L / 0 mg/L / 0.19-0.25 mg/L / 0.78-1.0 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (0.19-1.0 mg/L)	Mortality	High	679904
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), <24 Hour(s) (Measured in: F0 generation), Not Reported, Laboratory (CONTINUOUS LABORATORY CULTURES)	Fresh water, Aqueous (aquatic habitat), Renewal, NA F0 generation	Measured	0 mg/L / 0 mg/L / 0.75-0.91 mg/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (0.75-0.91 mg/L)	Development/Growth	High	679904

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), <24 Hour(s) (Measured in: F0 generation), Not Reported, Laboratory (CONTINUOUS LABORATORY CULTURES)	Fresh water, Aqueous (aquatic habitat), Renewal, NA F0 generation	Measured	0 mg/L / 0 mg/L / 0.75-0.91 mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (0.75-0.91 mg/L)	Reproductive/Teratogenic	High	679904
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), <24 Hour(s) (Measured in: F0 generation), Not Reported, Laboratory (CONTINUOUS LABORATORY CULTURES)	Fresh water, Aqueous (aquatic habitat), Renewal, NA F0 generation	Measured	0 mg/L / 0 mg/L / 0.75-0.91 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (0.75-0.91 mg/L)	Mortality	High	679904
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (CONTINUOUS LAB CULTURE)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 ug/L / 0 ug/L / 47 ug/L / 88 ug/L / 169 ug/L / 304 ug/L	Physiology (Intoxication-Immobile, Response Site: Not reported)	NR (47-304 ug/L)	Immobilization	Medium	1334281
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), <24 Hour(s) (Measured in: Adult), Not Reported, Laboratory (CONTINUOUS LAB CULTURE)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Adult	Measured	0 ug/L / 0 ug/L / 1.33-3.08 ug/L / 4.3-10.4 ug/L / 17.0-33.6 ug/L / 64.3-107 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NR (1.33-107 ug/L)	Mortality	Medium	1334281
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), <24 Hour(s) (Measured in: Adult), Not Reported, Laboratory (CONTINUOUS LAB CULTURE)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Adult	Measured	0 ug/L / 0 ug/L / 1.33-3.08 ug/L / 4.3-10.4 ug/L / 17.0-33.6 ug/L / 64.3-107 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (64.3-107 ug/L)	ADME (biotransformation)	Medium	1334281

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), <24 Hour(s) (Measured in: Adult), Not Reported, Laboratory (CONTINUOUS LAB CULTURE)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Adult	Measured	0 ug/L / 0 ug/L / 1.33-3.08 ug/L / 4.3-10.4 ug/L / 17.0-33.6 ug/L / 64.3-107 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (4.3-10.4 ug/L)	ADME (biotransformation)	Medium	1334281
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), <24 Hour(s) (Measured in: Adult), Not Reported, Laboratory (CONTINUOUS LAB CULTURE)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Adult	Measured	0 ug/L / 0 ug/L / 1.33-3.08 ug/L / 4.3-10.4 ug/L / 17.0-33.6 ug/L / 64.3-107 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (17.0-33.6 ug/L)	ADME (biotransformation)	Medium	1334281
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), <24 Hour(s) (Measured in: Adult), Not Reported, Laboratory (CONTINUOUS LAB CULTURE)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Adult	Measured	0 ug/L / 0 ug/L / 1.33-3.08 ug/L / 4.3-10.4 ug/L / 17.0-33.6 ug/L / 64.3-107 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (1.33-3.08 ug/L)	ADME (biotransformation)	Medium	1334281
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), <24 Hour(s) (Measured in: F1 generation), Not Reported, Laboratory (CONTINUOUS LAB CULTURE)	Fresh water, Aqueous (aquatic habitat), Renewal, NA F1 generation	Measured	0 ug/L / 0 ug/L / 1.33-3.08 ug/L / 4.3-10.4 ug/L / 17.0-33.6 ug/L / 64.3-107 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (64.3-107 ug/L)	Mortality	Medium	1334281

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, 6-24 Hour(s), Not Reported, Laboratory (RESEARCH CENTER FOR ECO-ENVIRONMENTAL SCIENCES, CHINESE ACADEMY OF SCIENCES, BEIJING, CN)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Not reported	0 mg/L / 0.11 mg/L / 0.28 mg/L / 0.59 mg/L / 0.99 mg/L / 2.03 mg/L / 3.10 mg/L / 3.97 mg/L	Physiology (Intoxication-Immobile, Response Site: Not reported)	EC50 (2.1 mg/L)	Immobilization	High	5750702
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Chemical analysis reported	NR / NR	Physiology (Intoxication-Immobile, Response Site: Not reported)	EC50 (>0.003 mg/L)	Immobilization	Uninformative	789536
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Chemical analysis reported	NR / NR	Physiology (Intoxication-Immobile, Response Site: Not reported)	EC10 (>0.003 mg/L)	Immobilization	Uninformative	789536
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Chemical analysis reported	NR / NR	Physiology (Intoxication-Immobile, Response Site: Not reported)	EC50 (>0.003 mg/L)	Immobilization	Uninformative	789536
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Chemical analysis reported	NR / NR	Physiology (Intoxication-Immobile, Response Site: Not reported)	EC10 (>0.003 mg/L)	Immobilization	Uninformative	789536
117-81-7	3 Day(s), (3 Day(s))	*Daphnia magna* (Water Flea), Juvenile, 3 Day(s), Female, Laboratory (LABORATORY CULTURE)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 uM / 0.1-10 uM	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	EC50 (6.9 uM)	Behavioral	Medium	3070913

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Day(s), (3 Day(s))	*Daphnia magna* (Water Flea), Juvenile, 3 Day(s), Female, Laboratory (LABORATORY CULTURE)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 uM / 0.1-10 uM	Mortality (Mortality-Survival, Response Site: Not reported)	NR (0.1-10 uM)	Mortality	Medium	3070913
117-81-7	3 Day(s), (1 Brood or litter)	*Daphnia magna* (Water Flea), Juvenile, 3 Day(s), Female, Laboratory (LABORATORY CULTURE)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 uM / 0.02 uM / 0.25 uM / 0.51 uM / 1.02 uM / 2.05 uM	Growth (Growth-Length, Response Site: Whole organism)	LOEC (0.51 uM)	Development/Growth	Medium	3070913
117-81-7	3 Day(s), (1 Brood or litter)	*Daphnia magna* (Water Flea), Juvenile, 3 Day(s), Female, Laboratory (LABORATORY CULTURE)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 uM / 0.02 uM / 0.25 uM / 0.51 uM / 1.02 uM / 2.05 uM	Growth (Growth-Length, Response Site: Whole organism)	NOEC (0.25 uM)	Development/Growth	Medium	3070913
117-81-7	3 Day(s), (3 Day(s))	*Daphnia magna* (Water Flea), Juvenile, 3 Day(s), Female, Laboratory (LABORATORY CULTURE)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 uM / 0.1-10 uM	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEC (5.1 uM)	Behavioral	Medium	3070913
117-81-7	3 Day(s), (1 Brood or litter)	*Daphnia magna* (Water Flea), Juvenile, 3 Day(s), Female, Laboratory (LABORATORY CULTURE)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 uM / 0.02 uM / 0.25 uM / 0.51 uM / 1.02 uM / 2.05 uM	Biochemical (Biochemistry-Lipid, Response Site: Not reported)	EC50 (0.4 uM)	Nutritional and Metabolic	Medium	3070913
117-81-7	3 Day(s), (3 Day(s))	*Daphnia magna* (Water Flea), Juvenile, 3 Day(s), Female, Laboratory (LABORATORY CULTURE)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 uM / 0.1-10 uM	Growth (Development-Molting, Response Site: Not reported)	NOEC (6.9 uM)	Development/Growth	Medium	3070913

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	1 Day(s), (7 Day(s))	*Daphnia magna* (Water Flea), Not reported, Not Reported, Laboratory (STOCK)	Fresh water, Aqueous (aquatic habitat), Flow-through, 180 Organism	Measured	0.3 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.3 ug/L)	ADME (biotransformation)	Uninformative	1334646
117-81-7	3 Day(s), (7 Day(s))	*Daphnia magna* (Water Flea), Not reported, Not Reported, Laboratory (STOCK)	Fresh water, Aqueous (aquatic habitat), Flow-through, 180 Organism	Measured	0.3 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.3 ug/L)	ADME (biotransformation)	Uninformative	1334646
117-81-7	7 Day(s), (7 Day(s))	*Daphnia magna* (Water Flea), Not reported, Not Reported, Laboratory (STOCK)	Fresh water, Aqueous (aquatic habitat), Flow-through, 180 Organism	Measured	0.3 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.3 ug/L)	ADME (biotransformation)	Uninformative	1334646
117-81-7	2 Week(s), (3 Week(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (STOCK)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ug/L / 3 ug/L / 10 ug/L / 30 ug/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEC (3 ug/L)	Reproductive/Teratogenic	Medium	1334646
117-81-7	3 Week(s), (3 Week(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (STOCK)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ug/L / 3 ug/L / 10 ug/L / 30 ug/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEC (3 ug/L)	Reproductive/Teratogenic	Medium	1334646
117-81-7	0 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Behavior (Behavior-Surfacing, Response Site: Not reported)	NOEC (72 ug/L)	Behavioral	High	1334951
117-81-7	0 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Behavior (Behavior-Surfacing, Response Site: Not reported)	LOEC (158 ug/L)	Behavioral	High	1334951

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	2 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Behavior (Behavior-Surfacing, Response Site: Not reported)	NOEC (158 ug/L)	Behavioral	High	1334951
117-81-7	2 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Behavior (Behavior-Surfacing, Response Site: Not reported)	LOEC (811 ug/L)	Behavioral	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-DNA concentration, Response Site: Whole organism)	LOEC (158 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-Lipid to DNA ratio, Response Site: Not reported)	LOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Biochemical (Biochemistry-Glycogen, Response Site: Whole organism)	LOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-RNA to DNA ratio, Response Site: Not reported)	LOEC (158 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Biochemical (Biochemistry-Glycogen, Response Site: Whole organism)	NOEC (158 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-Lipid to DNA ratio, Response Site: Not reported)	NOEC (158 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-RNA to DNA ratio, Response Site: Not reported)	NOEC (72 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Biochemical (Biochemistry-Glycogen to lipid ratio, Response Site: Not reported)	NOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Biochemical (Biochemistry-Lipid, Response Site: Whole organism)	NOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-Caloric equivalents to DNA ratio, Response Site: Not reported)	NOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-Protein to DNA ratio, Response Site: Not reported)	NOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-Protein to RNA ratio, Response Site: Not reported)	NOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (811 ug/L)	Reproductive/Teratogenic	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Physiology (Physiology-Caloric content, Response Site: Whole organism)	NOEC (158 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-Glycogen to DNA ratio, Response Site: Not reported)	LOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-DNA concentration, Response Site: Whole organism)	NOEC (72 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEC (811 ug/L)	Mortality	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-Glycogen to DNA ratio, Response Site: Not reported)	NOEC (158 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Biochemical (Biochemistry-Protein content, Response Site: Whole organism)	NOEC (158 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Physiology (Physiology-Caloric content, Response Site: Whole organism)	LOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Multiple (Multiple-Multiple effects reported as one result, Response Site: Not reported)	LOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Behavior (Behavior-Surfacing, Response Site: Not reported)	NOEC (158 ug/L)	Behavioral	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-Protein to RNA to DNA ratio, Response Site: Not reported)	NOEC (158 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Multiple (Multiple-Multiple effects reported as one result, Response Site: Not reported)	NOEC (158 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Behavior (Behavior-Surfacing, Response Site: Not reported)	LOEC (811 ug/L)	Behavioral	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-Protein to RNA to DNA ratio, Response Site: Not reported)	LOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-RNA concentration, Response Site: Whole organism)	LOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-RNA concentration, Response Site: Whole organism)	NOEC (158 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Biochemical (Biochemistry-Protein content, Response Site: Whole organism)	LOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	7 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (158 ug/L)	Mortality	High	1334951
117-81-7	13 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (158 ug/L)	Reproductive/Teratogenic	High	1334951
117-81-7	13 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEC (811 ug/L)	Reproductive/Teratogenic	High	1334951
117-81-7	17 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEC (811 ug/L)	Reproductive/Teratogenic	High	1334951

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	17 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (158 ug/L)	Reproductive/Teratogenic	High	1334951
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Biochemical (Biochemistry-Lipid, Response Site: Whole organism)	NOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Biochemical (Biochemistry-Glycogen to lipid ratio, Response Site: Not reported)	NOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Biochemical (Biochemistry-Glycogen, Response Site: Whole organism)	NOEC (158 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-DNA concentration, Response Site: Whole organism)	NOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-Glycogen to DNA ratio, Response Site: Not reported)	NOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (158 ug/L)	Mortality	High	1334951

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-Lipid to DNA ratio, Response Site: Not reported)	NOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-Protein to DNA ratio, Response Site: Not reported)	NOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-Protein to RNA ratio, Response Site: Not reported)	NOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-Protein to RNA to DNA ratio, Response Site: Not reported)	NOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Behavior (Behavior-Surfacing, Response Site: Not reported)	NOEC (158 ug/L)	Behavioral	High	1334951
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (158 ug/L)	Reproductive/Teratogenic	High	1334951
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Biochemical (Biochemistry-Protein content, Response Site: Whole organism)	NOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-Caloric equivalents to DNA ratio, Response Site: Not reported)	NOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	MATC (158-811 ug/L)	Mortality	High	1334951
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	MATC (158-811 ug/L)	Reproductive/Teratogenic	High	1334951
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Behavior (Behavior-Surfacing, Response Site: Not reported)	LOEC (811 ug/L)	Behavioral	High	1334951
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Biochemical (Biochemistry-Glycogen, Response Site: Whole organism)	LOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Physiology (Physiology-Caloric content, Response Site: Whole organism)	NOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-RNA to DNA ratio, Response Site: Not reported)	NOEC (811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEC (811 ug/L)	Mortality	High	1334951
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEC (811 ug/L)	Reproductive/Teratogenic	High	1334951
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Instar, <24 Hour(s), Not Reported, Laboratory (CULTURED)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 12 ug/L / 27 ug/L / 72 ug/L / 158 ug/L / 811 ug/L	Cellular (Genetics-RNA concentration, Response Site: Whole organism)	NR (12-811 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	1334951
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <18 Hour(s), Not Reported, Laboratory (MIC AQUATIC LABORATORY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 2.5 mg/L / 5 mg/L / 10 mg/L / 20 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (<1 mg/L)	Mortality	High	1335345
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <18 Hour(s), Not Reported, Laboratory (MIC AQUATIC LABORATORY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 2.5 mg/L / 5 mg/L / 10 mg/L / 20 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEC (1 mg/L)	Mortality	High	1335345
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <18 Hour(s), Not Reported, Laboratory (MIC AQUATIC LABORATORY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 2.5 mg/L / 5 mg/L / 10 mg/L / 20 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (9.50 (6.99-12.92) ppm)	Mortality	High	1335345

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <18 Hour(s), Not Reported, Laboratory (MIC AQUATIC LABORATORY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 2.5 mg/L / 5 mg/L / 10 mg/L / 20 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEC (1 mg/L)	Mortality	High	1335345
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <18 Hour(s), Not Reported, Laboratory (MIC AQUATIC LABORATORY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 2.5 mg/L / 5 mg/L / 10 mg/L / 20 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (<1 mg/L)	Mortality	High	1335345
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <18 Hour(s), Not Reported, Laboratory (MIC AQUATIC LABORATORY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 2.5 mg/L / 5 mg/L / 10 mg/L / 20 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC05 (0.024 ppm)	Mortality	High	1335345
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <18 Hour(s), Not Reported, Laboratory (MIC AQUATIC LABORATORY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 2.5 mg/L / 5 mg/L / 10 mg/L / 20 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (2.0 (1.17-3.40) ppm)	Mortality	High	1335345
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <18 Hour(s), Not Reported, Laboratory (MIC AQUATIC LABORATORY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 2.5 mg/L / 5 mg/L / 10 mg/L / 20 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (<1 ppm)	Mortality	High	1335353
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <18 Hour(s), Not Reported, Laboratory (MIC AQUATIC LABORATORY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 2.5 mg/L / 5 mg/L / 10 mg/L / 20 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEC (1 ppm)	Mortality	High	1335353

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <18 Hour(s), Not Reported, Laboratory (MIC AQUATIC LABORATORY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 2.5 mg/L / 5 mg/L / 10 mg/L / 20 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>20 mg/L)	Mortality	High	1335353
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <18 Hour(s), Not Reported, Laboratory (MIC AQUATIC LABORATORY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 2.5 mg/L / 5 mg/L / 10 mg/L / 20 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (13.9 (9.03-21.41) mg/L)	Mortality	High	1335353
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <18 Hour(s), Not Reported, Laboratory (MIC AQUATIC LABORATORY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 2.5 mg/L / 5 mg/L / 10 mg/L / 20 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEC (2.5 mg/L)	Mortality	High	1335353
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <18 Hour(s), Not Reported, Laboratory (MIC AQUATIC LABORATORY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 2.5 mg/L / 5 mg/L / 10 mg/L / 20 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (1 mg/L)	Mortality	High	1335353
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Neonate, <24 Hour(s), Not Reported, Laboratory (FROM KOREA INSTITUTE OF TOXICOLOGY, DAEJEON, KOREA)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	NR / NR	Physiology (Intoxication-Immobile, Response Site: Not reported)	EC90 (3.40 (2.21-432) uM)	Immobilization	Low	674438

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Neonate, <24 Hour(s), Not Reported, Laboratory (FROM KOREA INSTITUTE OF TOXICOLOGY, DAEJEON, KOREA)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	NR / NR	Physiology (Intoxication-Immobile, Response Site: Not reported)	EC50 (1.82 (1.38-7.11) uM)	Immobilization	Low	674438
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Neonate, <24 Hour(s), Not Reported, Laboratory (FROM KOREA INSTITUTE OF TOXICOLOGY, DAEJEON, KOREA)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	NR / NR	Physiology (Intoxication-Immobile, Response Site: Not reported)	EC10 (0.97 (0.08-1.30) uM)	Immobilization	Low	674438
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), <=24 Hour(s), Not Reported, Laboratory (SPRINGBORN LABORATORIES)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.026 mg/L / 0.045 mg/L / 0.077 mg/L / 0.16 mg/L / 0.29 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (0.16 mg/L)	Mortality	High	680120
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), <=24 Hour(s), Not Reported, Laboratory (SPRINGBORN LABORATORIES)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.026 mg/L / 0.045 mg/L / 0.077 mg/L / 0.16 mg/L / 0.29 mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (0.29 mg/L)	Reproductive/Teratogenic	High	680120
117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), <=24 Hour(s), Not Reported, Laboratory (SPRINGBORN LABORATORIES)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.026 mg/L / 0.045 mg/L / 0.077 mg/L / 0.16 mg/L / 0.29 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	MATC (0.11 mg/L)	Mortality	High	680120

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117-81-7	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), <=24 Hour(s), Not Reported, Laboratory (SPRINGBORN LABORATORIES)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.026 mg/L / 0.045 mg/L / 0.077 mg/L / 0.16 mg/L / 0.29 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.077 mg/L)	Mortality	High	680120
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, 6 Organism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Nuclear hormone receptor HR96 mRNA, Response Site: Not reported)	NR (1-10 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, 6 Organism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Ceramidase 2 mRNA, Response Site: Not reported)	LOEC (1 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, 6 Organism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-HSP70 mRNA, Response Site: Not reported)	LOEC (1 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, 6 Organism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Metallothionein-A mRNA, Response Site: Not reported)	LOEC (1 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, 6 Organism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Niemann-pick C 1b mRNA, Response Site: Not reported)	LOEC (1 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, 6 Organism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Catalase mRNA, Response Site: Not reported)	LOEC (10 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, 6 Organism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Ultraspiracle mRNA, Response Site: Not reported)	NOEC (10 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, 6 Organism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Sphingomyelinase 3 mRNA, Response Site: Not reported)	NR (1-10 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, 6 Organism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Magro mRNA, Response Site: Not reported)	NR (1-10 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, 6 Organism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Heat shock protein 90 mRNA, Response Site: Not reported)	NR (1-10 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, 6 Organism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Vitellogenin 2 mRNA, Response Site: Not reported)	NOEC (10 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, 6 Organism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Vitellogenin 1 mRNA, Response Site: Not reported)	NOEC (10 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, 6 Organism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Metallothionein-B mRNA, Response Site: Not reported)	NOEC (10 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, 6 Organism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Metallothionein mRNA, Response Site: Not reported)	NOEC (10 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, 6 Organism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Mannosidase mRNA, Response Site: Not reported)	NOEC (10 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468

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117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, 6 Organism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Glutathione S-transferase mRNA, Response Site: Not reported)	NOEC (10 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, 6 Organism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Vasa mRNA, Response Site: Not reported)	NOEC (1 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, 6 Organism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Death-associated protein-like 1 mRNA, Response Site: Not reported)	NOEC (1 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, 6 Organism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Catalase mRNA, Response Site: Not reported)	NOEC (1 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468

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117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, 6 Organism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Vasa mRNA, Response Site: Not reported)	LOEC (10 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
117-81-7	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, 6 Organism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Death-associated protein-like 1 mRNA, Response Site: Not reported)	LOEC (10 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
117-81-7	48 Hour(s), (96 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (10 uM)	Mortality	Uninformative	5043468
117-81-7	4 Day(s), (4 Day(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, 10 Organism	Unmeasured	0 uM / 1 uM / 10 uM	Biochemical (Biochemistry-Lipid, Response Site: Whole organism)	NR (1-10 uM)	Nutritional and Metabolic	Medium	5043468

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117-81-7	96 Hour(s), (96 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Reproduction (Reproduction-Hatch, Response Site: Not reported)	NOEC (10 uM)	Reproductive/Teratogenic	Medium	5043468
117-81-7	7 Day(s), (2 Week(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Renewal, 22 Organism	Unmeasured	0 uM / 1 uM	Growth (Morphology-Length, Response Site: Tail)	NOEC (1 uM)	Development/Growth	Medium	5043468
117-81-7	7 Day(s), (2 Week(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Renewal, 22 Organism	Unmeasured	0 uM / 1 uM	Growth (Growth-Length, Response Site: Whole organism)	NOEC (1 uM)	Development/Growth	Medium	5043468
117-81-7	14 Day(s), (2 Week(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Renewal, 20 Organism	Unmeasured	0 uM / 1 uM	Growth (Growth-Length, Response Site: Whole organism)	LOEC (1 uM)	Development/Growth	Medium	5043468

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117-81-7	14 Day(s), (2 Week(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Renewal, 20 Organism	Unmeasured	0 uM / 1 uM	Growth (Morphology-Length, Response Site: Tail)	NOEC (1 uM)	Development/Growth	Medium	5043468
117-81-7	30 Day(s), (<60 Day(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 uM / 1 uM	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEC (1 uM)	Reproductive/Teratogenic	Medium	5043468
117-81-7	~45 Day(s), (<60 Day(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aqueous (aquatic habitat), Renewal, 30 Organism	Unmeasured	0 uM / 1 uM	Mortality (Mortality-Lifespan, Response Site: Not reported)	NOEC (1 uM)	Mortality	Uninformative	5043468
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, >96 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Biochemical (Biochemistry-Total antioxidant capacity, Response Site: Not reported)	LOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837

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117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Biochemical (Enzyme(s)-Glutathione S-transferase, Response Site: Not reported)	LOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured values (some measured values reported in article)	0 mg/L / 0 mg/L / 0.37684 mg/L / 0.59694 mg/L / 0.75002 mg/L / 0.94427 mg/L / 1.2 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (0.83 (0.65-1.05) mg/L)	Immobilization	High	5498837
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, >96 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.18876 mg/L / 0.29037 mg/L / 0.37684 mg/L / 0.48802 mg/L / 0.59694 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (0.48 (0.38-0.60) mg/L)	Immobilization	High	5498837
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, >96 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Biochemical (Enzyme(s)-Glutathione S-transferase, Response Site: Not reported)	NR (0.00581-0.09744 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, >96 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Cellular (Genetics-Catalase mRNA, Response Site: Not reported)	NOEC (0.09744 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, >96 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Cellular (Genetics-Glutathione S-transferase mRNA, Response Site: Not reported)	NOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Not reported)	NOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Not reported)	NOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, >96 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Cellular (Genetics-Glutathione S-transferase mRNA, Response Site: Not reported)	LOEC (0.09744 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Not reported)	LOEC (0.09744 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Not reported)	LOEC (0.09744 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, >96 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Not reported)	LOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Cellular (Genetics-Glutathione S-transferase mRNA, Response Site: Not reported)	LOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, >96 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Not reported)	NOEC (0.09744 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, >96 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Not reported)	LOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Cellular (Genetics-Catalase mRNA, Response Site: Not reported)	LOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Biochemical (Biochemistry-Total antioxidant capacity, Response Site: Not reported)	LOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837
117-81-7	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Not reported)	LOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Not reported)	LOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, >96 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Biochemical (Biochemistry-Total antioxidant capacity, Response Site: Not reported)	LOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Not reported)	LOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, >96 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Not reported)	LOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, >96 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Not reported)	LOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, >96 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Cellular (Genetics-Glutathione S-transferase mRNA, Response Site: Not reported)	LOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837

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117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, >96 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Cellular (Genetics-Catalase mRNA, Response Site: Not reported)	LOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Cellular (Genetics-Catalase mRNA, Response Site: Not reported)	LOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Cellular (Genetics-Glutathione S-transferase mRNA, Response Site: Not reported)	LOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Biochemical (Enzyme(s)-Glutathione S-transferase, Response Site: Not reported)	LOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured values (some measured values reported in article)	0 mg/L / 0 mg/L / 0.37684 mg/L / 0.59694 mg/L / 0.75002 mg/L / 0.94427 mg/L / 1.2 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (0.56 (0.42-0.74) mg/L)	Immobilization	High	5498837
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Biochemical (Biochemistry-Total antioxidant capacity, Response Site: Not reported)	LOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, >96 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.18876 mg/L / 0.29037 mg/L / 0.37684 mg/L / 0.48802 mg/L / 0.59694 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (0.35 (0.24-0.50) mg/L)	Immobilization	High	5498837
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Not reported)	LOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837

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117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, >96 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Not reported)	LOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837
117-81-7	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, >96 Hour(s), Not Reported, Laboratory (LIAONING KEY LABORATORY OF DALIAN OCEAN UNIVERSITY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.00581 mg/L / 0.09744 mg/L	Biochemical (Enzyme(s)-Glutathione S-transferase, Response Site: Not reported)	LOEC (0.00581 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	5498837
117-81-7	96 Hour(s), (96 Hour(s))	*Eurytemora affinis* (Calanoid Copepod), Nauplii, Not Reported, Wild (COLLECTED FROM THE OLIGOHALINE ZONE OF THE SEINE RIVER ESTUARY NEAR THE TANCARVILLE BRIDGE (FRANCE))	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (511 (454-568) ug/L)	Mortality	High	679508

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117-81-7	10 Day(s), (10 Day(s))	*Eurytemora affinis* (Calanoid Copepod), Nauplii, Not Reported, Wild (COLLECTED FROM THE OLIGOHALINE ZONE OF THE SEINE RIVER ESTUARY NEAR THE TANCARVILLE BRIDGE (FRANCE))	Salt water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	NR / NR / NR	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (109 (80-138) ug/L)	Mortality	High	679508
117-81-7	10 Day(s), (10 Day(s))	*Eurytemora affinis* (Calanoid Copepod), Nauplii, Not Reported, Wild (COLLECTED FROM THE OLIGOHALINE ZONE OF THE SEINE RIVER ESTUARY NEAR THE TANCARVILLE BRIDGE (FRANCE))	Salt water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	NR / NR / NR	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (245 (207-283) ug/L)	Mortality	High	679508
117-81-7	>10-<15 Day(s), (30 Day(s))	*Eurytemora affinis* (Calanoid Copepod), Nauplii, <24 Hours post release, Not Reported, Wild (COLLECTED FROM THE OLIGOHALINE ZONE OF THE SEINE RIVER ESTUARY NEAR THE TANCARVILLE BRIDGE (FRANCE))	Salt water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 109 (80-138) ug/L	Growth (Development-Stage, Response Site: Not reported)	LOEC (109 (80-138) ug/L)	Development/Growth	High	679508

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117-81-7	1 Day(s), (21 Day(s))	*Gammarus pseudolimnaeus* (Scud), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 18 Organism	Measured	0.10 ug/L / 62.8 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.10 ug/L)	ADME (biotransformation)	Uninformative	1334646
117-81-7	1 Day(s), (21 Day(s))	*Gammarus pseudolimnaeus* (Scud), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 18 Organism	Measured	0.10 ug/L / 62.8 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (62.8 ug/L)	ADME (biotransformation)	Uninformative	1334646
117-81-7	3 Day(s), (21 Day(s))	*Gammarus pseudolimnaeus* (Scud), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 18 Organism	Measured	0.10 ug/L / 62.8 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (62.8 ug/L)	ADME (biotransformation)	Uninformative	1334646
117-81-7	3 Day(s), (21 Day(s))	*Gammarus pseudolimnaeus* (Scud), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 18 Organism	Measured	0.10 ug/L / 62.8 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.10 ug/L)	ADME (biotransformation)	Uninformative	1334646

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	96 Hour(s), (96 Hour(s))	*Gammarus pseudolimnaeus* (Scud), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	Not Reported	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>32 mg/L)	Mortality	Uninformative	1334646
117-81-7	7 Day(s), (21 Day(s))	*Gammarus pseudolimnaeus* (Scud), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 18 Organism	Measured	0.10 ug/L / 62.8 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.10 ug/L)	ADME (biotransformation)	Uninformative	1334646
117-81-7	7 Day(s), (21 Day(s))	*Gammarus pseudolimnaeus* (Scud), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 18 Organism	Measured	0.10 ug/L / 62.8 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (62.8 ug/L)	ADME (biotransformation)	Uninformative	1334646
117-81-7	14 Day(s), (21 Day(s))	*Gammarus pseudolimnaeus* (Scud), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 18 Organism	Measured	0.10 ug/L / 62.8 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (62.8 ug/L)	ADME (biotransformation)	Uninformative	1334646

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (21 Day(s))	*Gammarus pseudolimnaeus* (Scud), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 18 Organism	Measured	0.10 ug/L / 62.8 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.10 ug/L)	ADME (biotransformation)	Uninformative	1334646
117-81-7	21 Day(s), (21 Day(s))	*Gammarus pseudolimnaeus* (Scud), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 18 Organism	Measured	0.10 ug/L / 62.8 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (62.8 ug/L)	ADME (biotransformation)	Uninformative	1334646
117-81-7	27 Day(s), (27 Day(s))	*Gammarus pulex* (Scud), Not reported, Not Reported, Wild (UNPOLLUTED STREAMS IN SOUTH SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	~0.001-1.43 mg/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	BAF (~0.001-1.43 mg/L)	ADME (biotransformation)	Uninformative	59542
117-81-7	1-10 Day(s), (20 Day(s))	*Gammarus pulex* (Scud), Not reported, Not Reported, Wild (OBTAINED FROM A STREAM IN THE SOUTHERN PART OF SWEDEN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ug/L / 100 ug/L / 500 ug/L	Behavior (Behavior-Distance moved, change in direct movement, Response Site: Not reported)	LOEC (500 ug/L)	Behavioral	Medium	732821
117-81-7	10 Day(s), (20 Day(s))	*Gammarus pulex* (Scud), Not reported, Not Reported, Wild (OBTAINED FROM A STREAM IN THE SOUTHERN PART OF SWEDEN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ug/L / 100 ug/L / 500 ug/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	NR (100-500 ug/L)	ADME (biotransformation)	Medium	732821

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	1-10 Day(s), (20 Day(s))	*Gammarus pulex* (Scud), Not reported, Not Reported, Wild (OBTAINED FROM A STREAM IN THE SOUTHERN PART OF SWEDEN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 ug/L / 100 ug/L / 500 ug/L	Behavior (Behavior-Distance moved, change in direct movement, Response Site: Not reported)	NOEC (100 ug/L)	Behavioral	Medium	732821
117-81-7	1 Day(s), (7 Day(s))	*Hexagenia bilineata* (Mayfly), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 9 Organism	Measured	0.1 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.1 ug/L)	ADME (biotransformation)	Uninformative	1334646
117-81-7	3 Day(s), (7 Day(s))	*Hexagenia bilineata* (Mayfly), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 9 Organism	Measured	0.1 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.1 ug/L)	ADME (biotransformation)	Uninformative	1334646
117-81-7	7 Day(s), (7 Day(s))	*Hexagenia bilineata* (Mayfly), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 9 Organism	Measured	0.1 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.1 ug/L)	ADME (biotransformation)	Uninformative	1334646
117-81-7	10 Day(s), (10 Day(s))	*Hyalella azteca* (Scud), 7-14 Day(s), Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Leaching , Not Reported	Measured	<0.067 mg/L / 0.273 (0.199-0.407) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NR (0.273 (0.199-0.407) mg/L)	Development/Growth	High	679311
117-81-7	10 Day(s), (10 Day(s))	*Hyalella azteca* (Scud), 7-14 Day(s), Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	<0.360 mg/kg dw sediment / 3170 (2540-3640) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	NR (3170 (2540-3640) mg/kg dw sediment)	Development/Growth	High	679311

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (10 Day(s))	*Hyalella azteca* (Scud), 7-14 Day(s), Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Leaching , Not Reported	Measured	<0.067 mg/L / 0.273 (0.199-0.407) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NR (0.273 (0.199-0.407) mg/L)	Mortality	High	679311
117-81-7	10 Day(s), (10 Day(s))	*Hyalella azteca* (Scud), 7-14 Day(s), Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	<0.360 mg/kg dw sediment / 3170 (2540-3640) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NR (3170 (2540-3640) mg/kg dw sediment)	Mortality	High	679311
117-81-7	10 Day(s), (10 Day(s))	*Hyalella azteca* (Scud), 7-14 Day(s), Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	<0.360 mg/kg dw sediment / 3170 (2540-3640) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	NR (3170 (2540-3640) mg/kg dw sediment)	Development/Growth	High	679311
117-81-7	10 Day(s), (10 Day(s))	*Hyalella azteca* (Scud), 7-14 Day(s), Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Leaching , Not Reported	Measured	<0.067 mg/L / 0.273 (0.199-0.407) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NR (0.273 (0.199-0.407) mg/L)	Mortality	High	679311
117-81-7	10 Day(s), (10 Day(s))	*Hyalella azteca* (Scud), 7-14 Day(s), Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Leaching , Not Reported	Measured	<0.067 mg/L / 0.273 (0.199-0.407) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NR (0.273 (0.199-0.407) mg/L)	Development/Growth	High	679311
117-81-7	10 Day(s), (10 Day(s))	*Hyalella azteca* (Scud), 7-14 Day(s), Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	<0.360 mg/kg dw sediment / 3170 (2540-3640) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NR (3170 (2540-3640) mg/kg dw sediment)	Mortality	High	679311
117-81-7	10 Day(s), (10 Day(s))	*Hyalella azteca* (Scud), 7-14 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.0102 mg/L / 0.0590 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (0.0590 mg/L)	Mortality	High	679312

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	27 Day(s), (27 Day(s))	*Limnephilus sp.* (Caddisfly), Not reported, Not Reported, Wild (UNPOLLUTED STREAMS IN SOUTH SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	~0.001-1.43 mg/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	BAF (~0.001-1.43 mg/L)	ADME (biotransformation)	Uninformative	59542
117-81-7	24 Hour(s), (24 Hour(s))	*Litopenaeus vannamei* (White Shrimp), Not reported, Not Reported, Laboratory (UNIVERSITY OF ARIZONA EXPERIMENTAL CULTURE FACILITY, OAHU, HAWAII)	Salt water, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 ppm diet / 60 ppm diet / 600 ppm diet / 6000 ppm diet	Accumulation (Accumulation-Residue, Response Site: Not reported)	NR (60-6000 ppm diet)	ADME (biotransformation)	Uninformative	679685
117-81-7	96 Hour(s), (96 Hour(s))	*Litopenaeus vannamei* (White Shrimp), Not reported, Not Reported, Laboratory (UNIVERSITY OF ARIZONA EXPERIMENTAL CULTURE FACILITY, OAHU, HAWAII)	Salt water, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 ppm diet / 60 ppm diet / 600 ppm diet / 6000 ppm diet	Accumulation (Accumulation-Residue, Response Site: Not reported)	NR (60-6000 ppm diet)	ADME (biotransformation)	Uninformative	679685
117-81-7	14 Day(s), (14 Day(s))	*Litopenaeus vannamei* (White Shrimp), Not reported, Not Reported, Laboratory (UNIVERSITY OF ARIZONA EXPERIMENTAL CULTURE FACILITY, OAHU, HAWAII)	Salt water, Oral (diet, drink, gavage), Food, 18-24 Organisms	Measured	2 ppm diet / 44 ppm diet / 519 ppm diet / 660 ppm diet / 5468 ppm diet / 18313 ppm diet / 50227 ppm diet	Accumulation (Accumulation-Residue, Response Site: Not reported)	NR (44-50227 ppm diet)	ADME (biotransformation)	Low	679685

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (14 Day(s))	*Litopenaeus vannamei* (White Shrimp), Not reported, Not Reported, Laboratory (UNIVERSITY OF ARIZONA EXPERIMENTAL CULTURE FACILITY, OAHU, HAWAII)	Salt water, Oral (diet, drink, gavage), Food, 18-24 Organisms	Measured	2 ppm diet / 44 ppm diet / 519 ppm diet / 660 ppm diet / 5468 ppm diet / 18313 ppm diet / 50227 ppm diet	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (44-50227 ppm diet)	Mortality	Medium	679685
117-81-7	14 Day(s), (14 Day(s))	*Litopenaeus vannamei* (White Shrimp), Not reported, Not Reported, Laboratory (UNIVERSITY OF ARIZONA EXPERIMENTAL CULTURE FACILITY, OAHU, HAWAII)	Salt water, Oral (diet, drink, gavage), Food, 24 Organisms	Measured	2 ppm diet / 44 ppm diet / 519 ppm diet / 660 ppm diet / 5468 ppm diet / 18313 ppm diet / 50227 ppm diet	Growth (Development-Molting, Response Site: Not reported)	NOEC (50227 ppm diet)	Development/Growth	Medium	679685
117-81-7	14 Day(s), (14 Day(s))	*Litopenaeus vannamei* (White Shrimp), Not reported, Not Reported, Laboratory (UNIVERSITY OF ARIZONA EXPERIMENTAL CULTURE FACILITY, OAHU, HAWAII)	Salt water, Oral (diet, drink, gavage), Food, 18-24 Organisms	Measured	2 ppm diet / 44 ppm diet / 519 ppm diet / 660 ppm diet / 5468 ppm diet / 18313 ppm diet / 50227 ppm diet	Cellular (Histology-Histological changes, general, Response Site: Not reported)	NR (44-50227 ppm diet)	Development/Growth	Medium	679685
117-81-7	40 Minute(s), (40 Minute(s))	*Macrobrachium rosenbergii* (Giant River Prawn), Not intact, Not Reported, Laboratory (LOCAL PRAWN FARM)	Culture, In Vitro, In Vitro, Not Reported	Unmeasured	0 ug/ml / 100 ug/ml	Cellular (Genetics-Apoptosis, Response Site: Hemocyte)	NOEC (100 ug/ml)	Mechanistic: Cell signaling/function	Medium	789598

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Minute(s), (10 Minute(s))	*Macrobrachium rosenbergii* (Giant River Prawn), Not intact, Not Reported, Laboratory (LOCAL PRAWN FARM)	Culture, In Vitro, In Vitro, Not Reported	Unmeasured	0 ug/ml / 100 ug/ml	Physiology (Immunological-Pseudopodia formation, Response Site: Hemocyte)	NOEC (100 ug/ml)	Mechanistic: Cell signaling/function	Medium	789598
117-81-7	10 Minute(s), (40 Minute(s))	*Macrobrachium rosenbergii* (Giant River Prawn), Not intact, Not Reported, Laboratory (LOCAL PRAWN FARM)	Culture, In Vitro, In Vitro, Not Reported	Unmeasured	0 ug/ml / 100 ug/ml	Cellular (Genetics-Apoptosis, Response Site: Hemocyte)	NOEC (100 ug/ml)	Mechanistic: Cell signaling/function	Medium	789598
117-81-7	10 Minute(s), (40 Minute(s))	*Macrobrachium rosenbergii* (Giant River Prawn), Not intact, Not Reported, Laboratory (LOCAL PRAWN FARM)	Culture, In Vitro, In Vitro, Not Reported	Unmeasured	0 ug/ml / 100 ug/ml	Cellular (Histology-Necrosis, Response Site: Hemocyte)	LOEC (100 ug/ml)	Mechanistic: Cell signaling/function	Medium	789598
117-81-7	10 Minute(s), (10 Minute(s))	*Macrobrachium rosenbergii* (Giant River Prawn), Not intact, Not Reported, Laboratory (LOCAL PRAWN FARM)	Culture, In Vitro, In Vitro, Not Reported	Unmeasured	0 ug/ml / 100 ug/ml	Biochemical (Enzyme(s)-Phenoloxidase, Response Site: Hemocyte)	NOEC (100 ug/ml)	Mechanistic: Cell signaling/function	Medium	789598
117-81-7	40 Minute(s), (40 Minute(s))	*Macrobrachium rosenbergii* (Giant River Prawn), Not intact, Not Reported, Laboratory (LOCAL PRAWN FARM)	Culture, In Vitro, In Vitro, Not Reported	Unmeasured	0 ug/ml / 100 ug/ml	Cellular (Histology-Necrosis, Response Site: Hemocyte)	LOEC (100 ug/ml)	Mechanistic: Cell signaling/function	Medium	789598
117-81-7	10 Minute(s), (10 Minute(s))	*Macrobrachium rosenbergii* (Giant River Prawn), Not intact, Not Reported, Laboratory (LOCAL PRAWN FARM)	Culture, In Vitro, In Vitro, Not Reported	Unmeasured	0 ug/ml / 100 ug/ml	Cellular (Cell(s)-Aggregation/adhesion, Response Site: Hemocyte)	LOEC (100 ug/ml)	Mechanistic: Cell signaling/function	Medium	789598

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Minute(s), (10 Minute(s))	*Macrobrachium rosenbergii* (Giant River Prawn), Not intact, Not Reported, Laboratory (LOCAL PRAWN FARM)	Culture, In Vitro, In Vitro, Not Reported	Unmeasured	0 ug/ml / 100 ug/ml	Physiology (Physiology-Superoxide generation, Response Site: Hemocyte)	LOEC (100 ug/ml)	Mechanistic: Cell signaling/function	Medium	789598
117-81-7	40 Minute(s), (40 Minute(s))	*Macrobrachium rosenbergii* (Giant River Prawn), Not intact, Not Reported, Laboratory (LOCAL PRAWN FARM)	Culture, In Vitro, In Vitro, Not Reported	Unmeasured	0 ug/ml / 100 ug/ml	Cellular (Genetics-Apoptosis, Response Site: Hemocyte)	NOEC (100 ug/ml)	Mechanistic: Cell signaling/function	Medium	789598
117-81-7	10 Minute(s), (10 Minute(s))	*Macrobrachium rosenbergii* (Giant River Prawn), Not intact, Not Reported, Laboratory (LOCAL PRAWN FARM)	Culture, In Vitro, In Vitro, Not Reported	Unmeasured	0 ug/ml / 100 ug/ml	Physiology (Immunological-Pseudopodia formation, Response Site: Hemocyte)	NOEC (100 ug/ml)	Mechanistic: Cell signaling/function	Medium	789598
117-81-7	10 Minute(s), (40 Minute(s))	*Macrobrachium rosenbergii* (Giant River Prawn), Not intact, Not Reported, Laboratory (LOCAL PRAWN FARM)	Culture, In Vitro, In Vitro, Not Reported	Unmeasured	0 ug/ml / 100 ug/ml	Cellular (Genetics-Apoptosis, Response Site: Hemocyte)	NOEC (100 ug/ml)	Mechanistic: Cell signaling/function	Medium	789598
117-81-7	10 Minute(s), (10 Minute(s))	*Macrobrachium rosenbergii* (Giant River Prawn), Not intact, Not Reported, Laboratory (LOCAL PRAWN FARM)	Culture, In Vitro, In Vitro, Not Reported	Unmeasured	0 ug/ml / 100 ug/ml	Biochemical (Enzyme(s)-Phenoloxidase, Response Site: Hemocyte)	NOEC (100 ug/ml)	Mechanistic: Cell signaling/function	Medium	789598
117-81-7	40 Minute(s), (40 Minute(s))	*Macrobrachium rosenbergii* (Giant River Prawn), Not intact, Not Reported, Laboratory (LOCAL PRAWN FARM)	Culture, In Vitro, In Vitro, Not Reported	Unmeasured	0 ug/ml / 100 ug/ml	Cellular (Histology-Necrosis, Response Site: Hemocyte)	LOEC (100 ug/ml)	Mechanistic: Cell signaling/function	Medium	789598

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Minute(s), (10 Minute(s))	*Macrobrachium rosenbergii* (Giant River Prawn), Not intact, Not Reported, Laboratory (LOCAL PRAWN FARM)	Culture, In Vitro, In Vitro, Not Reported	Unmeasured	0 ug/ml / 100 ug/ml	Cellular (Cell(s)-Aggregation/adhesion, Response Site: Hemocyte)	LOEC (100 ug/ml)	Mechanistic: Cell signaling/function	Medium	789598
117-81-7	10 Minute(s), (40 Minute(s))	*Macrobrachium rosenbergii* (Giant River Prawn), Not intact, Not Reported, Laboratory (LOCAL PRAWN FARM)	Culture, In Vitro, In Vitro, Not Reported	Unmeasured	0 ug/ml / 100 ug/ml	Cellular (Histology-Necrosis, Response Site: Hemocyte)	LOEC (100 ug/ml)	Mechanistic: Cell signaling/function	Medium	789598
117-81-7	10 Minute(s), (10 Minute(s))	*Macrobrachium rosenbergii* (Giant River Prawn), Not intact, Not Reported, Laboratory (LOCAL PRAWN FARM)	Culture, In Vitro, In Vitro, Not Reported	Unmeasured	0 ug/ml / 100 ug/ml	Physiology (Physiology-Superoxide generation, Response Site: Hemocyte)	LOEC (100 ug/ml)	Mechanistic: Cell signaling/function	Medium	789598
117-81-7	1 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Trypsin mRNA, Response Site: Hepatopancreas)	NOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	1 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Trypsin mRNA, Response Site: Gill(s))	NOEC (30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	1 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Biochemical (Enzyme(s)-Phenoloxidase, Response Site: Hepatopancreas)	NR (1-30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	1 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Prophenoloxidase mRNA, Response Site: Gill(s))	NOEC (30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	1 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Prophenoloxidase mRNA, Response Site: Hepatopancreas)	NOEC (30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	1 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Serine protease 1 mRNA, Response Site: Hepatopancreas)	LOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	1 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Peroxinectin mRNA, Response Site: Gill(s))	LOEC (30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	1 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Lipopolysaccharide and beta-1,3-glucan binding protein mRNA, Response Site: Hepatopancreas)	LOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	1 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Lipopolysaccharide and beta-1,3-glucan binding protein mRNA, Response Site: Gill(s))	LOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	1 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Biochemical (Enzyme(s)-Phenoloxidase, Response Site: Gill(s))	NOEC (10 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	1 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Peroxinectin mRNA, Response Site: Gill(s))	NOEC (10 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	1 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Trypsin mRNA, Response Site: Hepatopancreas)	LOEC (10 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	1 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Serine protease 1 mRNA, Response Site: Gill(s))	LOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	1 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Peroxinectin mRNA, Response Site: Hepatopancreas)	NOEC (30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	1 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Biochemical (Enzyme(s)-Phenoloxidase, Response Site: Gill(s))	LOEC (30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	4 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Trypsin mRNA, Response Site: Hepatopancreas)	NR (1-30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	4 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Prophenoloxidase mRNA, Response Site: Hepatopancreas)	NOEC (30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	4 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Prophenoloxidase mRNA, Response Site: Gill(s))	NOEC (30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	4 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Peroxinectin mRNA, Response Site: Hepatopancreas)	NOEC (30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	4 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Serine protease 1 mRNA, Response Site: Hepatopancreas)	NR (1-30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	4 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Peroxinectin mRNA, Response Site: Gill(s))	NOEC (30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	4 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Lipopolysaccharide and beta-1,3-glucan binding protein mRNA, Response Site: Hepatopancreas)	NOEC (30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	4 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Lipopolysaccharide and beta-1,3-glucan binding protein mRNA, Response Site: Gill(s))	NOEC (30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	4 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Biochemical (Enzyme(s)-Phenoloxidase, Response Site: Hepatopancreas)	NOEC (30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	4 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Biochemical (Enzyme(s)-Phenoloxidase, Response Site: Gill(s))	NOEC (30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	4 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Serine protease 1 mRNA, Response Site: Gill(s))	NOEC (30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	4 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Trypsin mRNA, Response Site: Gill(s))	NOEC (30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	7 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Peroxinectin mRNA, Response Site: Hepatopancreas)	NOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	7 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, 60 Organism	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (30 ug/L)	Mortality	Medium	5567571
117-81-7	7 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Biochemical (Enzyme(s)-Phenoloxidase, Response Site: Gill(s))	LOEC (1 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Lipopolysaccharide and beta-1,3-glucan binding protein mRNA, Response Site: Gill(s))	NOEC (30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	7 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Lipopolysaccharide and beta-1,3-glucan binding protein mRNA, Response Site: Hepatopancreas)	NOEC (30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	7 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Prophenoloxidase mRNA, Response Site: Gill(s))	NOEC (30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	7 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Trypsin mRNA, Response Site: Gill(s))	NOEC (30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Prophenoloxidase mRNA, Response Site: Hepatopancreas)	NR (1-30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	7 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Serine protease 1 mRNA, Response Site: Gill(s))	NR (1-30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	7 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Serine protease 1 mRNA, Response Site: Hepatopancreas)	NR (1-30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	7 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, 60 Organism	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (10 ug/L)	Mortality	Medium	5567571

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Trypsin mRNA, Response Site: Hepatopancreas)	NR (1-30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	7 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Peroxinectin mRNA, Response Site: Hepatopancreas)	LOEC (10 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	7 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Biochemical (Enzyme(s)-Phenoloxidase, Response Site: Hepatopancreas)	NOEC (30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	7 Day(s), (7 Day(s))	*Macrophthalmus japonicus* (Crab), Adult, Not Reported, Not reported (COLLECTED FROM FISH MARKETS OF SUNCHEON BAY IN KOREA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 1 ug/L / 10 ug/L / 30 ug/L	Cellular (Genetics-Peroxinectin mRNA, Response Site: Gill(s))	NOEC (30 ug/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	5567571
117-81-7	96 Hour(s), (96 Hour(s))	*Nitocra spinipes* (Harpacticoid Copepod), Adult, 3-6 Week(s), Not Reported, Laboratory (FROM LAB CULTURE)	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	NR / NR / NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>300 mg/L)	Mortality	Medium	51937

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	28 Day(s), (28 Day(s))	*Palaemonetes pugio* (Daggerblade Grass Shrimp), Zoea, <1 Day(s), Not Reported, Wild (FROM SALT MARSHES AT THE EASTERN END OF GALVESTON ISLAND, TEXAS)	Salt water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ppm / 0.027-0.097 ppm / 0.138-0.368 ppm / 0.301-0.529 ppm / 0.39-0.510 ppm	Accumulation (Accumulation-Residue, Response Site: Whole organism)	NR (0.027-0.510 ppm)	ADME (biotransformation)	Medium	1333217
117-81-7	28 Day(s), (28 Day(s))	*Palaemonetes pugio* (Daggerblade Grass Shrimp), Zoea, <1 Day(s), Not Reported, Wild (FROM SALT MARSHES AT THE EASTERN END OF GALVESTON ISLAND, TEXAS)	Salt water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ppm / 0.027-0.097 ppm / 0.138-0.368 ppm / 0.301-0.529 ppm / 0.39-0.510 ppm	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.39-0.510 ppm)	Mortality	Medium	1333217
117-81-7	28 Day(s), (28 Day(s))	*Palaemonetes pugio* (Daggerblade Grass Shrimp), Zoea, <1 Day(s), Not Reported, Wild (FROM SALT MARSHES AT THE EASTERN END OF GALVESTON ISLAND, TEXAS)	Salt water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ppm / 0.027-0.097 ppm / 0.138-0.368 ppm / 0.301-0.529 ppm / 0.39-0.510 ppm	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	NOEC (0.39-0.510 ppm)	Development/Growth	Medium	1333217
117-81-7	96 Hour(s), (96 Hour(s))	*Paratanytarsus parthenogeneticus* (Midge), 2-3 Instar, Not Reported, Not reported (NR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.18 mg/L)	Mortality	High	1321996

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (48 Hour(s))	*Paratanytarsus parthenogeneticus* (Midge), Larva, Not Reported, Laboratory (EG&G BIONOMICS)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.0091 AI mg/L / 0.12-0.24 AI mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.24 AI mg/L)	Mortality	High	1316219
117-81-7	48 Hour(s), (48 Hour(s))	*Paratanytarsus parthenogeneticus* (Midge), Larva, Not Reported, Laboratory (EG&G BIONOMICS)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.0091 AI mg/L / 0.12-0.24 AI mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.24 AI mg/L)	Mortality	High	1316219
117-81-7	48 Hour(s), (48 Hour(s))	*Paratanytarsus parthenogeneticus* (Midge), Larva, Not Reported, Laboratory (EG&G BIONOMICS)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.0091 AI mg/L / 0.12-0.24 AI mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (0.12-0.24 AI mg/L)	Mortality	High	1316219
117-81-7	24 Hour(s), (48 Hour(s))	*Paratanytarsus parthenogeneticus* (Midge), Larva, 3-4 Instar, Not Reported, Laboratory (MIC AQUATIC LABORATORY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.62 mg/L / 1.25 mg/L / 2.5 mg/L / 5.0 mg/L / 10.0 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>10.0 mg/L)	Mortality	Low	1335357
117-81-7	48 Hour(s), (48 Hour(s))	*Paratanytarsus parthenogeneticus* (Midge), Larva, 3-4 Instar, Not Reported, Laboratory (MIC AQUATIC LABORATORY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.62 mg/L / 1.25 mg/L / 2.5 mg/L / 5.0 mg/L / 10.0 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (16.3 (8.7-82.6) mg/L)	Mortality	Low	1335357

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (48 Hour(s))	*Paratanytarsus parthenogeneticus* (Midge), Larva, 3-4 Instar, Not Reported, Laboratory (MIC AQUATIC LABORATORY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.62 mg/L / 1.25 mg/L / 2.5 mg/L / 5.0 mg/L / 10.0 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEC (5.0 mg/L)	Mortality	Low	1335357
117-81-7	48 Hour(s), (48 Hour(s))	*Paratanytarsus parthenogeneticus* (Midge), Larva, 3-4 Instar, Not Reported, Laboratory (MIC AQUATIC LABORATORY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.62 mg/L / 1.25 mg/L / 2.5 mg/L / 5.0 mg/L / 10.0 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (2.5 mg/L)	Mortality	Low	1335357
117-81-7	48 Hour(s), (48 Hour(s))	*Paratanytarsus parthenogeneticus* (Midge), Larva, 3-4 Instar, Not Reported, Laboratory (MIC AQUATIC LABORATORY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.62 mg/L / 1.25 mg/L / 2.5 mg/L / 5.0 mg/L / 10.0 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>10.0 mg/L)	Mortality	Low	1335357
117-81-7	24 Hour(s), (24 Hour(s))	*Parvocalanus crassirostris* (Copepod), Adult, Not Reported, Laboratory (JAMES COOK UNIVERSITY)	Salt water, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 0.16 ug/ml / 0.32 ug/ml / 0.64 ug/ml / 1.28 ug/ml / 2.56 ug/ml / 5.12 ug/ml / 10.24 ug/ml / 20.48 ug/ml / 40.00 ug/ml / 40.96 ug/ml / 50.00 ug/ml / 60.00 ug/ml / 70.00 ug/ml / 80.12 ug/ml	Mortality (Mortality-Survival, Response Site: Not reported)	NR (0.16-80.12 ug/ml)	Mortality	Medium	3859142

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (24 Hour(s))	*Parvocalanus crassirostris* (Copepod), Nauplii, Not Reported, Laboratory (JAMES COOK UNIVERSITY)	Salt water, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 0.16 ug/ml / 0.32 ug/ml / 0.64 ug/ml / 1.28 ug/ml / 2.56 ug/ml / 5.12 ug/ml	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-LETH (0.16 ug/ml)	Mortality	Medium	3859142
117-81-7	48 Hour(s), (48 Hour(s))	*Parvocalanus crassirostris* (Copepod), Nauplii, 1-3 Stage, Not Reported, Laboratory (JAMES COOK UNIVERSITY)	Salt water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 0 ng/L / 0.06 ng/L / 0.48 ng/L / 3.81 ng/L / 20.52 ng/L / 244.14 ng/L / 1953.13 ng/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (1.04 ng/L)	Mortality	Medium	3859142
117-81-7	48 Hour(s), (48 Hour(s))	*Parvocalanus crassirostris* (Copepod), Sexually mature, 5 Stage, Female, Laboratory (JAMES COOK UNIVERSITY)	Salt water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 160 ug/L / 320 ug/L / 640 ug/L / 1280 ug/L / 2560 ug/L / 5120 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (160-5120 ug/L)	Mortality	Medium	3859142
117-81-7	48 Hour(s), (48 Hour(s))	*Parvocalanus crassirostris* (Copepod), Nauplii, 1-3 Stage, Not Reported, Laboratory (JAMES COOK UNIVERSITY)	Salt water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 0 ng/L / 0.06 ng/L / 0.48 ng/L / 3.81 ng/L / 20.52 ng/L / 244.14 ng/L / 1953.13 ng/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEC (0.06 ng/L)	Mortality	Medium	3859142

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (48 Hour(s))	*Parvocalanus crassirostris* (Copepod), Nauplii, Not Reported, Laboratory (JAMES COOK UNIVERSITY)	Salt water, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 ng/L / 0 ng/L / 0.019 ng/L / 0.038 ng/L / 0.076 ng/L / 0.15 ng/L / 0.31 ng/L / 0.61 ng/L / 1.2 ng/L / 2.4 ng/L / 4.8 ng/L / 9.8 ng/L / 19 ng/L / 39 ng/L / 78 ng/L / 156 ng/L / 312 ng/L / 625 ng/L / 1250 ng/L / 2500 ng/L / 5000 ng/L / 10000 ng/L / 20000 ng/L / 40000 ng/L / 80000 ng/L	Mortality (Mortality-Survival, Response Site: Not reported)	NR (0.019-80000 ng/L)	Mortality	Medium	3859142
117-81-7	24-48 Hour(s), (48 Hour(s))	*Parvocalanus crassirostris* (Copepod), Adult, Not Reported, Laboratory (JAMES COOK UNIVERSITY)	Salt water, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 0.16 ug/ml / 0.32 ug/ml / 0.64 ug/ml / 1.28 ug/ml / 2.56 ug/ml / 5.12 ug/ml	Mortality (Mortality-Survival, Response Site: Not reported)	NR (0.16-5.12 ug/ml)	Mortality	Medium	3859142
117-81-7	5 Day(s), (5 Day(s))	*Parvocalanus crassirostris* (Copepod), Adult, 5 Stage, Both, Laboratory (JAMES COOK UNIVERSITY)	Salt water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/ml / 0 ng/ml / 0.33 ng/ml / 1.00 ng/ml / 3.00 ng/ml	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	LOEC (0.33 ng/ml)	Reproductive/Teratogenic	Medium	3859142

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	6 Day(s), (24 Day(s))	*Parvocalanus crassirostris* (Copepod), Not reported, Not Reported, Laboratory (JAMES COOK UNIVERSITY)	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ng/L / 0.1 ng/L	Cellular (Genetics-HSP70 mRNA, Response Site: Not reported)	NOEC (0.1 ng/L)	Mechanistic: Epigenetics; Genotox (including DNA repair)	Medium	3859142
117-81-7	6 Day(s), (24 Day(s))	*Parvocalanus crassirostris* (Copepod), Not reported, Not Reported, Laboratory (JAMES COOK UNIVERSITY)	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ng/L / 0.1 ng/L	Cellular (Genetics-Histone H3 mRNA, Response Site: Not reported)	LOEC (0.1 ng/L)	Mechanistic: Epigenetics; Genotox (including DNA repair)	Medium	3859142
117-81-7	24 Day(s), (24 Day(s))	*Parvocalanus crassirostris* (Copepod), Not reported, Not Reported, Laboratory (JAMES COOK UNIVERSITY)	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ng/L / 0.1 ng/L	Cellular (Genetics-Histone H3 mRNA, Response Site: Not reported)	NOEC (0.1 ng/L)	Mechanistic: Epigenetics; Genotox (including DNA repair)	Medium	3859142
117-81-7	24 Day(s), (24 Day(s))	*Parvocalanus crassirostris* (Copepod), Not reported, Not Reported, Laboratory (JAMES COOK UNIVERSITY)	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ng/L / 0.1 ng/L	Cellular (Genetics-HSP70 mRNA, Response Site: Not reported)	NOEC (0.1 ng/L)	Mechanistic: Epigenetics; Genotox (including DNA repair)	Medium	3859142
117-81-7	24 Day(s), (24 Day(s))	*Parvocalanus crassirostris* (Copepod), Multiple, Not Reported, Laboratory (JAMES COOK UNIVERSITY)	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 ng/L / 0.11 ng/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (0.11 ng/L)	Other (please specify below)	Medium	3859142

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Aquatic: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Day(s), (24 Day(s))	*Parvocalanus crassirostris* (Copepod), Multiple, Not Reported, Laboratory (JAMES COOK UNIVERSITY)	Salt water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ng/L / 0.11 ng/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (0.11 ng/L)	Other (please specify below)	Medium	3859142
117-81-7	24 Hour(s), (24 Hour(s))	*Penaeus aztecus* (Brown Shrimp), Not reported, Not Reported, Wild (GALVESTON BAY, GALVESTON, TEXAS)	Salt water, Aqueous (aquatic habitat), Static, 2 Organism	Chemical analysis reported	100 ppb / 500 ppb	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BAF (100 ppb)	ADME (biotransformation)	Uninformative	789995
117-81-7	24 Hour(s), (24 Hour(s))	*Penaeus aztecus* (Brown Shrimp), Not reported, Not Reported, Wild (GALVESTON BAY, GALVESTON, TEXAS)	Salt water, Aqueous (aquatic habitat), Static, 2 Organism	Chemical analysis reported	100 ppb / 500 ppb	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BAF (500 ppb)	ADME (biotransformation)	Uninformative	789995
117-81-7	27 Day(s), (27 Day(s))	*Sialis sp.* (Alderfly), Not reported, Not Reported, Wild (UNPOLLUTED STREAMS IN SOUTH SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	~0.001-1.43 mg/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	BAF (~0.001-1.43 mg/L)	ADME (biotransformation)	Uninformative	59542

* If multiple extractions contained all identical information except the effect level, extraction rows were collapsed and the differing levels are listed by comma in this row.

Aquatic: Mollusks Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (24 Hour(s))	*Crassostrea virginica* (American Or Virginia Oyster), Not reported, Not Reported, Wild (GALVESTON BAY, GALVESTON, TEXAS)	Salt water, Aqueous (aquatic habitat), Static, 2 Organism	Chemical analysis reported	100 ppb / 500 ppb	Accumulation (Accumulation-Residue, Response Site: Muscle)	BAF (100 ppb)	ADME (biotransformation)	Uninformative	789995
117-81-7	24 Hour(s), (24 Hour(s))	*Crassostrea virginica* (American Or Virginia Oyster), Not reported, Not Reported, Wild (GALVESTON BAY, GALVESTON, TEXAS)	Salt water, Aqueous (aquatic habitat), Static, 2 Organism	Chemical analysis reported	100 ppb / 500 ppb	Accumulation (Accumulation-Residue, Response Site: Muscle)	BAF (500 ppb)	ADME (biotransformation)	Uninformative	789995
117-81-7	<=12 Hour(s), (96 Hour(s))	*Haliotis diversicolor ssp. supertexta* (Taiwan Abalone), Embryo, Not Reported, Wild (FROM DAPENG BAY, SHENZHEN, CHINA)	Salt water, Aqueous (aquatic habitat), Not reported, Not Reported	Measured	0.001119 mg/L / 0.001119 mg/L / 0.0188 mg/L / 0.204 mg/L / 1.029 mg/L / 4.930 mg/L / 10.022 mg/L / 19.740 mg/L	Growth (Development-Normal, Response Site: Not reported)	LOEC (10.022 mg/L)	Development/Growth	Medium	697762
117-81-7	<=12 Hour(s), (96 Hour(s))	*Haliotis diversicolor ssp. supertexta* (Taiwan Abalone), Embryo, Not Reported, Wild (FROM DAPENG BAY, SHENZHEN, CHINA)	Salt water, Aqueous (aquatic habitat), Not reported, Not Reported	Measured	0.001119 mg/L / 0.001119 mg/L / 0.0188 mg/L / 0.204 mg/L / 1.029 mg/L / 4.930 mg/L / 10.022 mg/L / 19.740 mg/L	Growth (Development-Cell cleavage, Response Site: Not reported)	NOEC (19.740 mg/L)	Development/Growth	Medium	697762

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Aquatic: Mollusks Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	<=12 Hour(s), (96 Hour(s))	*Haliotis diversicolor ssp. supertexta* (Taiwan Abalone), Embryo, Not Reported, Wild (FROM DAPENG BAY, SHENZHEN, CHINA)	Salt water, Aqueous (aquatic habitat), Not reported, Not Reported	Measured	0.001119 mg/L / 0.001119 mg/L / 0.0188 mg/L / 0.204 mg/L / 1.029 mg/L / 4.930 mg/L / 10.022 mg/L / 19.740 mg/L	Growth (Development-Normal, Response Site: Not reported)	NOEC (4.930 mg/L)	Development/Growth	Medium	697762
117-81-7	<=96 Hour(s), (96 Hour(s))	*Haliotis diversicolor ssp. supertexta* (Taiwan Abalone), Embryo, Not Reported, Wild (FROM DAPENG BAY, SHENZHEN, CHINA)	Salt water, Aqueous (aquatic habitat), Not reported, Not Reported	Measured	0.001119 mg/L / 0.001119 mg/L / 0.0188 mg/L / 0.204 mg/L / 1.029 mg/L / 4.930 mg/L / 10.022 mg/L / 19.740 mg/L	Growth (Development-Metamorphosis, Response Site: Not reported)	LOEC (0.204 mg/L)	Development/Growth	Medium	697762
117-81-7	<=96 Hour(s), (96 Hour(s))	*Haliotis diversicolor ssp. supertexta* (Taiwan Abalone), Embryo, Not Reported, Wild (FROM DAPENG BAY, SHENZHEN, CHINA)	Salt water, Aqueous (aquatic habitat), Not reported, Not Reported	Measured	0.001119 mg/L / 0.001119 mg/L / 0.0188 mg/L / 0.204 mg/L / 1.029 mg/L / 4.930 mg/L / 10.022 mg/L / 19.740 mg/L	Growth (Development-Metamorphosis, Response Site: Not reported)	NOEC (0.0188 mg/L)	Development/Growth	Medium	697762
117-81-7	<=96 Hour(s), (96 Hour(s))	*Haliotis diversicolor ssp. supertexta* (Taiwan Abalone), Embryo, Not Reported, Wild (FROM DAPENG BAY, SHENZHEN, CHINA)	Salt water, Aqueous (aquatic habitat), Not reported, Not Reported	Measured	0.001119 mg/L / 0.001119 mg/L / 0.0188 mg/L / 0.204 mg/L / 1.029 mg/L / 4.930 mg/L / 10.022 mg/L / 19.740 mg/L	Growth (Development-Normal, Response Site: Not reported)	NOEC (19.740 mg/L)	Development/Growth	Medium	697762

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Aquatic: Mollusks Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA Stage, (NA Stage)	*Haliotis diversicolor ssp. supertexta* (Taiwan Abalone), Embryo, Not Reported, Wild (COLLECTED FROM DAPENG BAY, SHENZHEN, CHINA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 5 mg/L / 10 mg/L / 15 mg/L / 20 mg/L	Growth (Development-Abnormal, Response Site: Not reported)	NOEC (20 mg/L)	Development/Growth	Medium	1322103
117-81-7	96 Hour(s), (96 Hour(s))	*Haliotis diversicolor ssp. supertexta* (Taiwan Abalone), Larva, Not Reported, Wild (COLLECTED FROM DAPENG BAY, SHENZHEN, CHINA)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, NA Larvae	Unmeasured	0 mg/L / 0 mg/L / 5 mg/L / 10 mg/L / 15 mg/L / 20 mg/L	Population (Population-Settling, Response Site: Not reported)	NOEC (20 mg/L)	Development/Growth	Medium	1322103
117-81-7	28 Day(s), (42 Day(s))	*Mytilus edulis* (Common Bay Mussel,Blue Mussel), Not reported, Not Reported, Wild (COLLECTED LOCALLY)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 ug/L / 4.1 (3.9-4.3) ug/L / 42.1 (39.9-44.6) ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (4.1 (3.9-4.3) ug/L)	ADME (biotransformation)	Medium	1334379
117-81-7	28 Day(s), (42 Day(s))	*Mytilus edulis* (Common Bay Mussel,Blue Mussel), Not reported, Not Reported, Wild (COLLECTED LOCALLY)	Salt water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 ug/L / 4.1 (3.9-4.3) ug/L / 42.1 (39.9-44.6) ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (42.1 (39.9-44.6) ug/L)	ADME (biotransformation)	Medium	1334379
117-81-7	27 Day(s), (27 Day(s))	*Planorbis corneus* (Ramshorn Snail), Not reported, Not Reported, Wild (UNPOLLUTED STREAMS IN SOUTH SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	~0.001-1.43 mg/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	BAF (~0.001-1.43 mg/L)	ADME (biotransformation)	Uninformative	59542

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Aquatic: Mollusks Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID

* If multiple extractions contained all identical information except the effect level, extraction rows were collapsed and the differing levels are listed by comma in this row.

Aquatic: Non-vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	27 Day(s), (27 Day(s))	*Chara sp.* (Stonewort), Not reported, Not Reported, Wild (UNPOLLUTED STREAMS IN SOUTH SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	~0.001-1.43 mg/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	BAF (~0.001-1.43 mg/L)	ADME (biotransformation)	Uninformative	59542
117-81-7	1 Hour(s), (150 Hour(s))	*Chlorella vulgaris* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (HYDROBIOLOGY, ACADEMY OF SCIENCE, CHINA)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0.3 mg/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	BCF (0.3 mg/L)	ADME (biotransformation)	Uninformative	679344
117-81-7	96 Hour(s), (5 Day(s))	*Chlorella vulgaris* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (DALIAN OCEAN UNIVERSITY OF LIAONING KEY LABORATORY OF AQUATIC BIOLOGY)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 4 mg/L / 6 mg/L / 8 mg/L / 10 mg/L	Population (Population-Specific growth rate, Response Site: Not reported)	EC50 (6.02 mg/L)	Development/Growth	Low	5692135

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Aquatic: Non-vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	1-5 Day(s), (5 Day(s))	*Chlorella vulgaris* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (DALIAN OCEAN UNIVERSITY OF LIAONING KEY LABORATORY OF AQUATIC BIOLOGY)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 4 mg/L / 6 mg/L / 8 mg/L / 10 mg/L	Population (Population-Specific growth rate, Response Site: Not reported)	LOEC (2 mg/L)	Development/Growth	Low	5692135
117-81-7	5 Day(s), (5 Day(s))	*Chlorella vulgaris* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (DALIAN OCEAN UNIVERSITY OF LIAONING KEY LABORATORY OF AQUATIC BIOLOGY)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 4 mg/L / 6 mg/L / 8 mg/L / 10 mg/L	Biochemical (Enzyme(s)-Glutathione peroxidase, Response Site: Not reported)	LOEC (2 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	5692135
117-81-7	5 Day(s), (5 Day(s))	*Chlorella vulgaris* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (DALIAN OCEAN UNIVERSITY OF LIAONING KEY LABORATORY OF AQUATIC BIOLOGY)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 4 mg/L / 6 mg/L / 8 mg/L / 10 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Not reported)	LOEC (2 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	5692135

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Aquatic: Non-vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	5 Day(s), (5 Day(s))	*Chlorella vulgaris* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (DALIAN OCEAN UNIVERSITY OF LIAONING KEY LABORATORY OF AQUATIC BIOLOGY)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 4 mg/L / 6 mg/L / 8 mg/L / 10 mg/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (2 mg/L)	Development/Growth	Low	5692135
117-81-7	5 Day(s), (5 Day(s))	*Chlorella vulgaris* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (DALIAN OCEAN UNIVERSITY OF LIAONING KEY LABORATORY OF AQUATIC BIOLOGY)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 4 mg/L / 6 mg/L / 8 mg/L / 10 mg/L	Biochemical (Biochemistry-Hydrogen peroxide, Response Site: Not reported)	LOEC (4 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	5692135
117-81-7	5 Day(s), (5 Day(s))	*Chlorella vulgaris* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (DALIAN OCEAN UNIVERSITY OF LIAONING KEY LABORATORY OF AQUATIC BIOLOGY)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 4 mg/L / 6 mg/L / 8 mg/L / 10 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Not reported)	LOEC (4 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	5692135

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Aquatic: Non-vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	5 Day(s), (5 Day(s))	*Chlorella vulgaris* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (DALIAN OCEAN UNIVERSITY OF LIAONING KEY LABORATORY OF AQUATIC BIOLOGY)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 4 mg/L / 6 mg/L / 8 mg/L / 10 mg/L	Biochemical (Biochemistry-Hydrogen peroxide, Response Site: Not reported)	NOEC (2 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	5692135
117-81-7	5 Day(s), (5 Day(s))	*Chlorella vulgaris* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (DALIAN OCEAN UNIVERSITY OF LIAONING KEY LABORATORY OF AQUATIC BIOLOGY)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 4 mg/L / 6 mg/L / 8 mg/L / 10 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Not reported)	NOEC (2 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	5692135
117-81-7	24-96 Hour(s), (96 Hour(s))	*Karenia brevis* (Dinoflagellate), Exponential growth phase (log), Not Reported, Laboratory (INSTITUTE OF OCEANOGRAPHY, CHINESE ACADEMY OF SCIENCES)	Salt water, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 ml/L / 0 ml/L / 1 ml/L / 5 ml/L / 10 ml/L / 20 ml/L / 30 ml/L / 50 ml/L / 100 ml/L / 150 ml/L / 200 ml/L	Population (Population-Abundance, Response Site: Not reported)	NR (1-200 ml/L)	Development/Growth	Low	3230225

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Aquatic: Non-vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	72 Hour(s), (72 Hour(s))	*Raphidocelis subcapitata* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Chemical analysis reported	0 mg/L / NR	Population (Population-Population growth rate, Response Site: Not reported)	EC10 (>0.003 mg/L)	Development/Growth	Uninformative	789536
117-81-7	72 Hour(s), (72 Hour(s))	*Raphidocelis subcapitata* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Chemical analysis reported	0 mg/L / NR	Population (Population-Population growth rate, Response Site: Not reported)	EC50 (>0.003 mg/L)	Development/Growth	Uninformative	789536
117-81-7	96 Hour(s), (96 Hour(s))	*Selenastrum capricornutum* (Green Algae), Not reported, Not Reported, Not reported (NR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	NR / NR	Population (Population-Abundance, Response Site: Not reported)	EC50 (>0.10 mg/L)	Development/Growth	High	1321996
117-81-7	6 Day(s), (6 Day(s))	*Selenastrum capricornutum* (Green Algae), Not reported, Not Reported, Laboratory (FROM UNIVERSITY OF TEXAS AT AUSTIN, MAINTAINED AT SPRINGBORN BIONOMIC, INC)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.1 mg/L / <0.1-0.2 mg/L	Population (Population-Chlorophyll, Response Site: Not reported)	EC50 (>0.1 mg/L)	Development/Growth	High	1316196

* If multiple extractions contained all identical information except the effect level, extraction rows were collapsed and the differing levels are listed by comma in this row.

Aquatic: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	27 Day(s), (27 Day(s))	*Dendrocoelum lacteum* (Turbellarian, Planarian), Not reported, Not Reported, Wild (UNPOLLUTED STREAMS IN SOUTH SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	~0.001-1.43 mg/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	BAF (~0.001-1.43 mg/L)	ADME (biotransformation)	Uninformative	59542
117-81-7	27 Day(s), (27 Day(s))	*Helobdella sp.* (Leeches), Not reported, Not Reported, Wild (UNPOLLUTED STREAMS IN SOUTH SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	~0.001-1.43 mg/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	BAF (~0.001-1.43 mg/L)	ADME (biotransformation)	Uninformative	59542
117-81-7	10 Day(s), (10 Day(s))	*Lumbriculus variegatus* (Oligochaete, Worm), Adult, Not Reported, Laboratory (CULTURES STARTED AT THE STANFORD RESEARCH INSTITUTE, MENLO PARK, CA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.0102 mg/L / 0.0691 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (0.0691 mg/L)	Mortality	High	679312
117-81-7	27 Day(s), (27 Day(s))	*Tubifex sp.* (Tubificid Worm), Not reported, Not Reported, Wild (UNPOLLUTED STREAMS IN SOUTH SWEDEN)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	~0.001-1.43 mg/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	BAF (~0.001-1.43 mg/L)	ADME (biotransformation)	Uninformative	59542

* If multiple extractions contained all identical information except the effect level, extraction rows were collapsed and the differing levels are listed by comma in this row.

Aquatic: Other Invertebrates Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (96 Hour(s))	*Brachionus calyciflorus* (Rotifer), Neonate, Not Reported, Laboratory (GEORGIA INSTITUTE OF TECHNOLOGY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2 mg/L	Population (Population-Population growth rate, Response Site: Not reported)	NOEC (2 mg/L)	Reproductive/Teratogenic	Medium	3070931
117-81-7	48 Hour(s), (96 Hour(s))	*Brachionus calyciflorus* (Rotifer), Neonate, Not Reported, Laboratory (GEORGIA INSTITUTE OF TECHNOLOGY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2 mg/L	Reproduction (Reproduction-Mictic ratio, Response Site: Not reported)	NOEC (2 mg/L)	Reproductive/Teratogenic	Medium	3070931
117-81-7	72 Hour(s), (96 Hour(s))	*Brachionus calyciflorus* (Rotifer), Neonate, Not Reported, Laboratory (GEORGIA INSTITUTE OF TECHNOLOGY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2 mg/L	Population (Population-Population growth rate, Response Site: Not reported)	NOEC (2 mg/L)	Reproductive/Teratogenic	Medium	3070931
117-81-7	72 Hour(s), (96 Hour(s))	*Brachionus calyciflorus* (Rotifer), Neonate, Not Reported, Laboratory (GEORGIA INSTITUTE OF TECHNOLOGY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2 mg/L	Reproduction (Reproduction-Mictic ratio, Response Site: Not reported)	NOEC (2 mg/L)	Reproductive/Teratogenic	Medium	3070931
117-81-7	96 Hour(s), (96 Hour(s))	*Brachionus calyciflorus* (Rotifer), Neonate, Not Reported, Laboratory (GEORGIA INSTITUTE OF TECHNOLOGY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2 mg/L	Population (Population-Population growth rate, Response Site: Not reported)	NOEC (2 mg/L)	Reproductive/Teratogenic	Medium	3070931
117-81-7	96 Hour(s), (96 Hour(s))	*Brachionus calyciflorus* (Rotifer), Neonate, Not Reported, Laboratory (GEORGIA INSTITUTE OF TECHNOLOGY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2 mg/L	Reproduction (Reproduction-Mictic ratio, Response Site: Not reported)	NOEC (2 mg/L)	Reproductive/Teratogenic	Medium	3070931

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Aquatic: Other Invertebrates Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	96 Hour(s), (96 Hour(s))	*Brachionus calyciflorus* (Rotifer), Neonate, Not Reported, Laboratory (GEORGIA INSTITUTE OF TECHNOLOGY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2 mg/L	Reproduction (Reproduction-Pregnant, Paris or Gravid, Response Site: Not reported)	NOEC (2 mg/L)	Reproductive/Teratogenic	Medium	3070931
117-81-7	96 Hour(s), (96 Hour(s))	*Brachionus calyciflorus* (Rotifer), Neonate, Not Reported, Laboratory (GEORGIA INSTITUTE OF TECHNOLOGY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2 mg/L	Reproduction (Reproduction-Reproduction, general, Response Site: Not reported)	NOEC (2 mg/L)	Reproductive/Teratogenic	Medium	3070931
117-81-7	~144 Hour(s), (144 Hour(s))	*Brachionus calyciflorus* (Rotifer), Not reported, Not Reported, Laboratory (ORIGINALLY FROM LAKE JINGHU, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 0.005 ug/L / 0.05 ug/L / 0.5 ug/L / 5 ug/L / 50 ug/L / 500 ug/L / 5000 ug/L	Mortality (Mortality-Life expectancy, Response Site: Not reported)	NOEC (5000 ug/L)	Mortality	Medium	1336226
117-81-7	~144 Hour(s), (144 Hour(s))	*Brachionus calyciflorus* (Rotifer), Not reported, Not Reported, Laboratory (ORIGINALLY FROM LAKE JINGHU, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 0.005 ug/L / 0.05 ug/L / 0.5 ug/L / 5 ug/L / 50 ug/L / 500 ug/L / 5000 ug/L	Reproduction (Reproduction-Net Reproductive Rate, Response Site: Not reported)	NOEC (5000 ug/L)	Reproductive/Teratogenic	Medium	1336226
117-81-7	~144 Hour(s), (144 Hour(s))	*Brachionus calyciflorus* (Rotifer), Not reported, Not Reported, Laboratory (ORIGINALLY FROM LAKE JINGHU, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 0.005 ug/L / 0.05 ug/L / 0.5 ug/L / 5 ug/L / 50 ug/L / 500 ug/L / 5000 ug/L	Population (Population-Generation time, Response Site: Not reported)	NOEC (5000 ug/L)	Reproductive/Teratogenic	Medium	1336226

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Aquatic: Other Invertebrates Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	~144 Hour(s), (144 Hour(s))	*Brachionus calyciflorus* (Rotifer), Not reported, Not Reported, Laboratory (ORIGINALLY FROM LAKE JINGHU, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 0 ug/L / 0.005 ug/L / 0.05 ug/L / 0.5 ug/L / 5 ug/L / 50 ug/L / 500 ug/L / 5000 ug/L	Population (Population-Intrinsic rate of increase, Response Site: Not reported)	NOEC (5000 ug/L)	Reproductive/Teratogenic	Medium	1336226

* If multiple extractions contained all identical information except the effect level, extraction rows were collapsed and the differing levels are listed by comma in this row.

Aquatic: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (7 Day(s))	*Lemna minor* (Duckweed), Not reported, Not Reported, Laboratory (CULTIVATED IN STOCK CULTURES)	Culture, Aqueous (aquatic habitat), Not reported, NA Frond	Unmeasured	0 mg/L / 0.005 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L / 0.2 mg/L / 0.4 mg/L	Biochemical (Biochemistry-Chlorophyll, Response Site: Frond)	NR (0.005-0.4 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology); Photosynthesis	Uninformative	1340050
117-81-7	7 Day(s), (7 Day(s))	*Lemna minor* (Duckweed), Not reported, Not Reported, Laboratory (CULTIVATED IN STOCK CULTURES)	Culture, Aqueous (aquatic habitat), Not reported, NA Frond	Unmeasured	0 mg/L / 0.005 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L / 0.2 mg/L / 0.4 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Frond)	NR (0.005-0.4 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology); Photosynthesis	Uninformative	1340050
117-81-7	7 Day(s), (7 Day(s))	*Lemna minor* (Duckweed), Not reported, Not Reported, Laboratory (CULTIVATED IN STOCK CULTURES)	Culture, Aqueous (aquatic habitat), Not reported, NA Frond	Unmeasured	0 mg/L / 0.005 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L / 0.2 mg/L / 0.4 mg/L	Biochemical (Biochemistry-Soluble proteins, Response Site: Frond)	NR (0.005-0.4 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology); Photosynthesis	Uninformative	1340050
117-81-7	7 Day(s), (7 Day(s))	*Lemna minor* (Duckweed), Not reported, Not Reported, Laboratory (CULTIVATED IN STOCK CULTURES)	Culture, Aqueous (aquatic habitat), Not reported, NA Frond	Unmeasured	0 mg/L / 0.005 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L / 0.2 mg/L / 0.4 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Frond)	NR (0.005-0.4 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology); Photosynthesis	Uninformative	1340050
117-81-7	7 Day(s), (7 Day(s))	*Lemna minor* (Duckweed), Not reported, Not Reported, Laboratory (CULTIVATED IN STOCK CULTURES)	Culture, Aqueous (aquatic habitat), Not reported, NA Frond	Unmeasured	0 mg/L / 0.005 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L / 0.2 mg/L / 0.4 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Frond)	NR (0.005-0.4 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology); Photosynthesis	Uninformative	1340050

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Aquatic: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (7 Day(s))	*Spirodela polyrrhiza* (Large Duckweed), Not reported, Not Reported, Laboratory (CULTIVATED IN STOCK CULTURES)	Culture, Aqueous (aquatic habitat), Not reported, NA Frond	Unmeasured	0 mg/L / 0.005 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L / 0.2 mg/L / 0.4 mg/L	Biochemical (Biochemistry-Chlorophyll, Response Site: Frond)	NR (0.005-0.4 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology); Photosynthesis	Uninformative	1340050
117-81-7	7 Day(s), (7 Day(s))	*Spirodela polyrrhiza* (Large Duckweed), Not reported, Not Reported, Laboratory (CULTIVATED IN STOCK CULTURES)	Culture, Aqueous (aquatic habitat), Not reported, NA Frond	Unmeasured	0 mg/L / 0.005 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L / 0.2 mg/L / 0.4 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Frond)	NR (0.005-0.4 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology); Photosynthesis	Uninformative	1340050
117-81-7	7 Day(s), (7 Day(s))	*Spirodela polyrrhiza* (Large Duckweed), Not reported, Not Reported, Laboratory (CULTIVATED IN STOCK CULTURES)	Culture, Aqueous (aquatic habitat), Not reported, NA Frond	Unmeasured	0 mg/L / 0.005 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L / 0.2 mg/L / 0.4 mg/L	Biochemical (Biochemistry-Soluble proteins, Response Site: Frond)	NR (0.005-0.4 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology); Photosynthesis	Uninformative	1340050
117-81-7	7 Day(s), (7 Day(s))	*Spirodela polyrrhiza* (Large Duckweed), Not reported, Not Reported, Laboratory (CULTIVATED IN STOCK CULTURES)	Culture, Aqueous (aquatic habitat), Not reported, NA Frond	Unmeasured	0 mg/L / 0.005 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L / 0.2 mg/L / 0.4 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Frond)	NR (0.005-0.4 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology); Photosynthesis	Uninformative	1340050

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Aquatic: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (7 Day(s))	*Spirodela polyrrhiza* (Large Duckweed), Not reported, Not Reported, Laboratory (CULTIVATED IN STOCK CULTURES)	Culture, Aqueous (aquatic habitat), Not reported, NA Frond	Unmeasured	0 mg/L / 0.005 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L / 0.2 mg/L / 0.4 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Frond)	NR (0.005-0.4 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology); Photosynthesis	Uninformative	1340050

* If multiple extractions contained all identical information except the effect level, extraction rows were collapsed and the differing levels are listed by comma in this row.

Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	15 Day(s), (15 Day(s))	*Achillea millefolium* (Common Yarrow), Seedling, 36 Days post planting/sowing, Not Reported, Not reported	Culture, Environmental, Spray, hand, Not Reported	Measured	0 ug/cm2 lf / 0 ug/cm2 lf / 3.5 ug/cm2 lf	Biochemical (Biochemistry-Chlorophyll, Response Site: Leaf/needle)	NR (3.5 ug/cm2 lf)	Mechanistic: Photosynthesis	Medium	9430481
117-81-7	15 Day(s), (15 Day(s))	*Achillea millefolium* (Common Yarrow), Seedling, 36 Days post planting/sowing, Not Reported, Not reported	Culture, Environmental, Spray, hand, Not Reported	Measured	0 ug/cm2 lf / 0 ug/cm2 lf / 3.5 ug/cm2 lf	Accumulation (Accumulation-Residue, Response Site: Whole organism)	NR (3.5 ug/cm2 lf)	ADME (biotransformation)	Medium	9430481
117-81-7	48 Hour(s), (48 Hour(s))	*Allium cepa* (Common Onion), Rootstock, Not Reported, Laboratory (HNOS. APARICI Y ROSA S.L., VALENCIA, SPAIN)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM / 100 uM / 500 uM	Cellular (Genetics-Mitotic index (# mitoses/total cells), Response Site: Root)	NOEL (10 uM)	Mechanistic: Genotox (including DNA repair)	High	1249401
117-81-7	48 Hour(s), (48 Hour(s))	*Allium cepa* (Common Onion), Rootstock, Not Reported, Laboratory (HNOS. APARICI Y ROSA S.L., VALENCIA, SPAIN)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 uM / 100 uM / 500 uM	Cellular (Genetics-Micronuclei, Response Site: Root)	LOEL (100 uM)	Mechanistic: Genotox (including DNA repair)	High	1249401
117-81-7	48 Hour(s), (48 Hour(s))	*Allium cepa* (Common Onion), Rootstock, Not Reported, Laboratory (HNOS. APARICI Y ROSA S.L., VALENCIA, SPAIN)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 uM / 100 uM / 500 uM	Cellular (Genetics-Mitotic abnormalites, clumping, Response Site: Root)	LOEL (500 uM)	Mechanistic: Genotox (including DNA repair)	High	1249401

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (48 Hour(s))	*Allium cepa* (Common Onion), Rootstock, Not Reported, Laboratory (HNOS. APARICI Y ROSA S.L., VALENCIA, SPAIN)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 uM / 100 uM / 500 uM	Cellular (Genetics-Mitotic abnormalities, ana-telophase, Response Site: Root)	LOEL (500 uM)	Mechanistic: Genotox (including DNA repair)	High	1249401
117-81-7	48 Hour(s), (48 Hour(s))	*Allium cepa* (Common Onion), Rootstock, Not Reported, Laboratory (HNOS. APARICI Y ROSA S.L., VALENCIA, SPAIN)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 uM / 100 uM / 500 uM	Cellular (Genetics-Mitotic abnormalites, clumping, Response Site: Root)	NOEL (100 uM)	Mechanistic: Genotox (including DNA repair)	High	1249401
117-81-7	48 Hour(s), (48 Hour(s))	*Allium cepa* (Common Onion), Rootstock, Not Reported, Laboratory (HNOS. APARICI Y ROSA S.L., VALENCIA, SPAIN)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 uM / 100 uM / 500 uM	Cellular (Genetics-Mitotic abnormalities, ana-telophase, Response Site: Root)	NOEL (100 uM)	Mechanistic: Genotox (including DNA repair)	High	1249401
117-81-7	48 Hour(s), (48 Hour(s))	*Allium cepa* (Common Onion), Rootstock, Not Reported, Laboratory (HNOS. APARICI Y ROSA S.L., VALENCIA, SPAIN)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 uM / 100 uM / 500 uM	Cellular (Genetics-Mitotic abnormalities, bridge, Response Site: Root)	NOEL (500 uM)	Mechanistic: Genotox (including DNA repair)	High	1249401
117-81-7	48 Hour(s), (48 Hour(s))	*Allium cepa* (Common Onion), Rootstock, Not Reported, Laboratory (HNOS. APARICI Y ROSA S.L., VALENCIA, SPAIN)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 uM / 100 uM / 500 uM	Cellular (Genetics-Mitotic abnormalities, disturbed polarity, Response Site: Root)	NOEL (500 uM)	Mechanistic: Genotox (including DNA repair)	High	1249401

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (48 Hour(s))	*Allium cepa* (Common Onion), Rootstock, Not Reported, Laboratory (HNOS. APARICI Y ROSA S.L., VALENCIA, SPAIN)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 uM / 100 uM / 500 uM	Cellular (Genetics-Mitotic abnormalities, laggard, Response Site: Root)	NOEL (500 uM)	Mechanistic: Genotox (including DNA repair)	High	1249401
117-81-7	48 Hour(s), (48 Hour(s))	*Allium cepa* (Common Onion), Rootstock, Not Reported, Laboratory (HNOS. APARICI Y ROSA S.L., VALENCIA, SPAIN)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM / 100 uM / 500 uM	Cellular (Genetics-Mitotic index (# mitoses/total cells), Response Site: Root)	LOEL (100 uM)	Mechanistic: Genotox (including DNA repair)	High	1249401
117-81-7	72 Hour(s), (72 Hour(s))	*Allium cepa* (Common Onion), Rootstock, Not Reported, Laboratory (HNOS. APARICI Y ROSA S.L., VALENCIA, SPAIN)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM / 100 uM / 500 uM	Growth (Growth-Length, Response Site: Root)	NOEL (500 uM)	Development/Growth	Uninformative	1249401
117-81-7	168 Hour(s), (168 Hour(s))	*Allium cepa* (Common Onion), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Chlorophyll, Response Site: Not reported)	LOEL (5 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
117-81-7	168 Hour(s), (168 Hour(s))	*Allium cepa* (Common Onion), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Carotenoid content, Response Site: Not reported)	LOEL (5 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	168 Hour(s), (168 Hour(s))	*Allium cepa* (Common Onion), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Root)	NR (5-500 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
117-81-7	168 Hour(s), (168 Hour(s))	*Allium cepa* (Common Onion), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Length, Response Site: Root)	NR (5-500 mg/kg soil)	Development/Growth	High	2915866
117-81-7	168 Hour(s), (168 Hour(s))	*Allium cepa* (Common Onion), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Length, Response Site: Shoot)	NR (5-500 mg/kg soil)	Development/Growth	High	2915866
117-81-7	168 Hour(s), (168 Hour(s))	*Allium cepa* (Common Onion), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Reproduction (Reproduction-Germination, Response Site: Not reported)	NOEL (500 mg/kg soil)	Reproductive/Teratogenic	High	2915866

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	168 Hour(s), (168 Hour(s))	*Allium cepa* (Common Onion), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Biomass, Response Site: Whole organism)	NOEL (500 mg/kg soil)	Development/Growth	High	2915866
117-81-7	168 Hour(s), (168 Hour(s))	*Allium cepa* (Common Onion), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Shoot)	LOEL (5 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Avena sativa* (Common Oat), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Length, Response Site: Shoot)	NR (5-500 mg/kg soil)	Development/Growth	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Avena sativa* (Common Oat), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Reproduction (Reproduction-Germination, Response Site: Not reported)	NOEL (500 mg/kg soil)	Reproductive/Teratogenic	High	2915866

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	72 Hour(s), (72 Hour(s))	*Avena sativa* (Common Oat), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Length, Response Site: Root)	NOEL (500 mg/kg soil)	Development/Growth	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Avena sativa* (Common Oat), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Biomass, Response Site: Whole organism)	NR (5-500 mg/kg soil)	Development/Growth	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Avena sativa* (Common Oat), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Root)	LOEL (5 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Avena sativa* (Common Oat), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Shoot)	LOEL (5 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	30 Day(s), (30 Day(s))	*Benincasa hispida* (Waxgourd), Not reported, Not Reported, Laboratory	Natural soil, Environmental, Fumigation, Not Reported	Chemical analysis reported	5 ug/m3 / 50 ug/m3 / 500 ug/m3	Accumulation (Accumulation-Residue, Response Site: Fruit,Leaf/needle,Stem)	NR (5-500 ug/m3)	ADME (biotransformation)	Low	2215486
117-81-7	6 Week(s), (6 Week(s))	*Benincasa hispida* (Waxgourd), Not reported, Not Reported, Laboratory	Natural soil, Environmental, Fumigation, 3 Organism	Measured	0.5 ug/g wet wt / 5 ug/g wet wt / 50 ug/g wet wt / 500 ug/g wet wt	Accumulation (Accumulation-Residue, Response Site: Fruit,Leaf/needle,Peel,Stem)	NR (0.5-500 ug/g wet wt)	ADME (biotransformation)	Low	2215486
117-81-7	3 Day(s), (3 Day(s))	*Brassica napus* (Rapeseed), Seedling, 5 Leaf stage, Not Reported, Not reported	Natural soil, Environmental, Spray, hand, Not Reported	Measured	0 ug/cm2 lf / 0 ug/cm2 lf / 2.19 ug/cm2 lf / 8.75 ug/cm2 lf	Physiology (Injury-Chlorosis, Response Site: Leaf/needle)	NR (2.19-8.75 ug/cm2 lf)	Skin and Connective Tissue	Uninformative	9430481
117-81-7	3 Day(s), (3 Day(s))	*Brassica napus* (Rapeseed), Seedling, 4 Leaf stage, Not Reported, Not reported	Natural soil, Environmental, Spray, hand, Not Reported	Measured	0 ug/cm2 lf / 0 ug/cm2 lf / 0.44 ug/cm2 lf / 2.19 ug/cm2 lf	Physiology (Injury-Chlorosis, Response Site: Leaf/needle)	NR (0.44-2.19 ug/cm2 lf)	Skin and Connective Tissue	Uninformative	9430481
117-81-7	72 Hour(s), (72 Hour(s))	*Cucumis sativus* (Cucumber), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Reproduction (Reproduction-Germination, Response Site: Not reported)	NOEL (500 mg/kg soil)	Reproductive/Teratogenic	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Cucumis sativus* (Cucumber), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Length, Response Site: Root)	NR (5-500 mg/kg soil)	Development/Growth	High	2915866

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	72 Hour(s), (72 Hour(s))	*Cucumis sativus* (Cucumber), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Shoot)	NOEL (5 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Cucumis sativus* (Cucumber), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Root)	NOEL (5 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Cucumis sativus* (Cucumber), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Biomass, Response Site: Whole organism)	NR (5-500 mg/kg soil)	Development/Growth	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Cucumis sativus* (Cucumber), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Length, Response Site: Shoot)	LOEL (5 mg/kg soil)	Development/Growth	High	2915866

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	72 Hour(s), (72 Hour(s))	*Cucumis sativus* (Cucumber), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Shoot)	LOEL (20 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Cucumis sativus* (Cucumber), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Root)	LOEL (20 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
117-81-7	7 Day(s), (7 Day(s))	*Cucumis sativus* (Cucumber), Seedling, 25 Days post germination, Not Reported, Laboratory (THE CUCUMBER RESEARCH LABORATORY AT THE NORTHEAST AGRICULTURE UNIVERSITY, HEILONGJIANG, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 30 mg/L / 50 mg/L / 100 mg/L / 200 mg/L	Biochemical (Biochemistry-Chlorophyll B concentration, Response Site: Leaf/needle)	NOEL (30 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Oxidative stress (including redox biology); Photosynthesis	Medium	1987637

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (7 Day(s))	*Cucumis sativus* (Cucumber), Seedling, 25 Days post germination, Not Reported, Laboratory (THE CUCUMBER RESEARCH LABORATORY AT THE NORTHEAST AGRICULTURE UNIVERSITY, HEILONGJIANG, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 30 mg/L / 50 mg/L / 100 mg/L / 200 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Leaf/needle)	NOEL (30 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Oxidative stress (including redox biology); Photosynthesis	Medium	1987637
117-81-7	7 Day(s), (7 Day(s))	*Cucumis sativus* (Cucumber), Seedling, 25 Days post germination, Not Reported, Laboratory (THE CUCUMBER RESEARCH LABORATORY AT THE NORTHEAST AGRICULTURE UNIVERSITY, HEILONGJIANG, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 30 mg/L / 50 mg/L / 100 mg/L / 200 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Leaf/needle)	NOEL (30 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Oxidative stress (including redox biology); Photosynthesis	Medium	1987637
117-81-7	7 Day(s), (7 Day(s))	*Cucumis sativus* (Cucumber), Seedling, 25 Days post germination, Not Reported, Laboratory (THE CUCUMBER RESEARCH LABORATORY AT THE NORTHEAST AGRICULTURE UNIVERSITY, HEILONGJIANG, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 30 mg/L / 50 mg/L / 100 mg/L / 200 mg/L	Biochemical (Biochemistry-Hydrogen peroxide, Response Site: Leaf/needle)	NOEL (30 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Oxidative stress (including redox biology); Photosynthesis	Medium	1987637

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (7 Day(s))	*Cucumis sativus* (Cucumber), Seedling, 25 Days post germination, Not Reported, Laboratory (THE CUCUMBER RESEARCH LABORATORY AT THE NORTHEAST AGRICULTURE UNIVERSITY, HEILONGJIANG, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 30 mg/L / 50 mg/L / 100 mg/L / 200 mg/L	Biochemical (Biochemistry-Chlorophyll A concentration, Response Site: Leaf/needle)	NOEL (50 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Oxidative stress (including redox biology); Photosynthesis	Medium	1987637
117-81-7	7 Day(s), (7 Day(s))	*Cucumis sativus* (Cucumber), Seedling, 25 Days post germination, Not Reported, Laboratory (THE CUCUMBER RESEARCH LABORATORY AT THE NORTHEAST AGRICULTURE UNIVERSITY, HEILONGJIANG, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 30 mg/L / 50 mg/L / 100 mg/L / 200 mg/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEL (50 mg/L)	Development/Growth	Medium	1987637
117-81-7	7 Day(s), (7 Day(s))	*Cucumis sativus* (Cucumber), Seedling, 25 Days post germination, Not Reported, Laboratory (THE CUCUMBER RESEARCH LABORATORY AT THE NORTHEAST AGRICULTURE UNIVERSITY, HEILONGJIANG, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 30 mg/L / 50 mg/L / 100 mg/L / 200 mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (30 mg/L)	Development/Growth	Medium	1987637

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (7 Day(s))	*Cucumis sativus* (Cucumber), Seedling, 25 Days post germination, Not Reported, Laboratory (THE CUCUMBER RESEARCH LABORATORY AT THE NORTHEAST AGRICULTURE UNIVERSITY, HEILONGJIANG, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 30 mg/L / 50 mg/L / 100 mg/L / 200 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Leaf/needle)	LOEL (50 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Oxidative stress (including redox biology); Photosynthesis	Medium	1987637
117-81-7	7 Day(s), (7 Day(s))	*Cucumis sativus* (Cucumber), Seedling, 25 Days post germination, Not Reported, Laboratory (THE CUCUMBER RESEARCH LABORATORY AT THE NORTHEAST AGRICULTURE UNIVERSITY, HEILONGJIANG, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 30 mg/L / 50 mg/L / 100 mg/L / 200 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Leaf/needle)	LOEL (50 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Oxidative stress (including redox biology); Photosynthesis	Medium	1987637
117-81-7	7 Day(s), (7 Day(s))	*Cucumis sativus* (Cucumber), Seedling, 25 Days post germination, Not Reported, Laboratory (THE CUCUMBER RESEARCH LABORATORY AT THE NORTHEAST AGRICULTURE UNIVERSITY, HEILONGJIANG, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 30 mg/L / 50 mg/L / 100 mg/L / 200 mg/L	Biochemical (Biochemistry-Hydrogen peroxide, Response Site: Leaf/needle)	LOEL (50 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Oxidative stress (including redox biology); Photosynthesis	Medium	1987637

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (7 Day(s))	*Cucumis sativus* (Cucumber), Seedling, 25 Days post germination, Not Reported, Laboratory (THE CUCUMBER RESEARCH LABORATORY AT THE NORTHEAST AGRICULTURE UNIVERSITY, HEILONGJIANG, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 30 mg/L / 50 mg/L / 100 mg/L / 200 mg/L	Biochemical (Biochemistry-Chlorophyll B concentration, Response Site: Leaf/needle)	LOEL (50 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Oxidative stress (including redox biology); Photosynthesis	Medium	1987637
117-81-7	7 Day(s), (7 Day(s))	*Cucumis sativus* (Cucumber), Seedling, 25 Days post germination, Not Reported, Laboratory (THE CUCUMBER RESEARCH LABORATORY AT THE NORTHEAST AGRICULTURE UNIVERSITY, HEILONGJIANG, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 30 mg/L / 50 mg/L / 100 mg/L / 200 mg/L	Biochemical (Enzyme(s)-Peroxidase activity, Response Site: Leaf/needle)	LOEL (30 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Oxidative stress (including redox biology); Photosynthesis	Medium	1987637
117-81-7	7 Day(s), (7 Day(s))	*Cucumis sativus* (Cucumber), Seedling, 25 Days post germination, Not Reported, Laboratory (THE CUCUMBER RESEARCH LABORATORY AT THE NORTHEAST AGRICULTURE UNIVERSITY, HEILONGJIANG, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 30 mg/L / 50 mg/L / 100 mg/L / 200 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Leaf/needle)	LOEL (30 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Oxidative stress (including redox biology); Photosynthesis	Medium	1987637

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (7 Day(s))	*Cucumis sativus* (Cucumber), Seedling, 25 Days post germination, Not Reported, Laboratory (THE CUCUMBER RESEARCH LABORATORY AT THE NORTH-EAST AGRI-CULTURE UNI-VERSITY, HEI-LONGJIANG, CHINA)	Natural soil, Envi-ronmental, Envi-ronmental, unspec-ified, Not Reported	Unmeasured	0 mg/L / 30 mg/L / 50 mg/L / 100 mg/L / 200 mg/L	Biochemical (Biochemistry-Chlorophyll A concentration, Response Site: Leaf/needle)	LOEL (100 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Oxidative stress (including redox biology); Photosynthesis	Medium	1987637
117-81-7	7 Day(s), (7 Day(s))	*Cucumis sativus* (Cucumber), Seedling, 25 Days post germination, Not Reported, Laboratory (THE CUCUMBER RESEARCH LABORATORY AT THE NORTH-EAST AGRI-CULTURE UNI-VERSITY, HEI-LONGJIANG, CHINA)	Natural soil, Envi-ronmental, Envi-ronmental, unspec-ified, Not Reported	Unmeasured	0 mg/L / 30 mg/L / 50 mg/L / 100 mg/L / 200 mg/L	Cellular (Histology-Ultrastructural changes, Re-sponse Site: Leaf/needle)	NR (30-200 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Oxidative stress (including redox biology); Photosynthesis	Medium	1987637
117-81-7	7 Day(s), (7 Day(s))	*Cucumis sativus* (Cucumber), Seedling, 25 Days post germination, Not Reported, Laboratory (THE CUCUMBER RESEARCH LABORATORY AT THE NORTH-EAST AGRI-CULTURE UNI-VERSITY, HEI-LONGJIANG, CHINA)	Natural soil, Envi-ronmental, Envi-ronmental, unspec-ified, Not Reported	Unmeasured	0 mg/L / 30 mg/L / 50 mg/L / 100 mg/L / 200 mg/L	Biochemical (Biochemistry-Chlorophyll A:Chlorophyll B, Response Site: Leaf/needle)	NOEL (200 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Oxidative stress (including redox biology); Photosynthesis	Medium	1987637

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	72 Hour(s), (72 Hour(s))	*Lolium perenne* (Perennial Ryegrass), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Shoot)	LOEL (5 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Lolium perenne* (Perennial Ryegrass), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Length, Response Site: Root)	NOEL (5 mg/kg soil)	Development/Growth	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Lolium perenne* (Perennial Ryegrass), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Length, Response Site: Shoot)	LOEL (20 mg/kg soil)	Development/Growth	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Lolium perenne* (Perennial Ryegrass), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Length, Response Site: Root)	LOEL (20 mg/kg soil)	Development/Growth	High	2915866

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	72 Hour(s), (72 Hour(s))	*Lolium perenne* (Perennial Ryegrass), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Root)	NR (5-500 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Lolium perenne* (Perennial Ryegrass), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Biomass, Response Site: Whole organism)	NR (5-500 mg/kg soil)	Development/Growth	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Lolium perenne* (Perennial Ryegrass), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Length, Response Site: Shoot)	NOEL (5 mg/kg soil)	Development/Growth	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Lolium perenne* (Perennial Ryegrass), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Reproduction (Reproduction-Germination, Response Site: Not reported)	NOEL (500 mg/kg soil)	Reproductive/Teratogenic	High	2915866

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	72 Hour(s), (72 Hour(s))	*Medicago sativa* (Alfalfa), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Reproduction (Reproduction-Germination, Response Site: Not reported)	NOEL (500 mg/kg soil)	Reproductive/Teratogenic	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Medicago sativa* (Alfalfa), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Shoot)	LOEL (5 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Medicago sativa* (Alfalfa), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Carotenoid content, Response Site: Not reported)	LOEL (5 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Medicago sativa* (Alfalfa), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Length, Response Site: Root)	LOEL (5 mg/kg soil)	Development/Growth	High	2915866

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	72 Hour(s), (72 Hour(s))	*Medicago sativa* (Alfalfa), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Chlorophyll, Response Site: Not reported)	NR (5-500 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Medicago sativa* (Alfalfa), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Root)	NR (5-500 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Medicago sativa* (Alfalfa), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Length, Response Site: Shoot)	LOEL (5 mg/kg soil)	Development/Growth	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Medicago sativa* (Alfalfa), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Biomass, Response Site: Whole organism)	NR (5-500 mg/kg soil)	Development/Growth	High	2915866

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	27 Day(s), (27 Day(s))	*Mentha aquatica* (Peppermint), Not reported, Not Reported, Wild (UNPOLLUTED STREAMS IN SOUTH SWEDEN)	Aqueous, Environmental, Environmental, unspecified, Not Reported	Measured	~0.001-1.43 mg/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	BAF (~0.001-1.43 mg/L)	ADME (biotransformation)	Uninformative	59542
117-81-7	72 Hour(s), (72 Hour(s))	*Raphanus sativus* (Radish), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Shoot)	NOEL (5 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Raphanus sativus* (Radish), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Length, Response Site: Root)	LOEL (5 mg/kg soil)	Development/Growth	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Raphanus sativus* (Radish), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Biomass, Response Site: Whole organism)	LOEL (5 mg/kg soil)	Development/Growth	High	2915866

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	72 Hour(s), (72 Hour(s))	*Raphanus sativus* (Radish), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Root)	LOEL (5 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Raphanus sativus* (Radish), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Reproduction (Reproduction-Germination, Response Site: Not reported)	NOEL (500 mg/kg soil)	Reproductive/Teratogenic	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Raphanus sativus* (Radish), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Shoot)	LOEL (20 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Raphanus sativus* (Radish), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Length, Response Site: Shoot)	NR (5-500 mg/kg soil)	Development/Growth	High	2915866

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	72 Hour(s), (72 Hour(s))	*Raphanus sativus* (Radish), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Carotenoid content, Response Site: Not reported)	NR (5-500 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Raphanus sativus* (Radish), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Chlorophyll, Response Site: Not reported)	NR (5-500 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
117-81-7	3 Day(s), (3 Day(s))	*Sinapis alba* (White Mustard), Seedling, 8 Leaf stage, Not Reported, Not reported	Natural soil, Environmental, Spray, hand, Not Reported	Measured	0 ug/cm2 lf / 0 ug/cm2 lf / 2.19 ug/cm2 lf / 8.75 ug/cm2 lf	Physiology (Injury-Chlorosis, Response Site: Leaf/needle)	NR (2.19-8.75 ug/cm2 lf)	Skin and Connective Tissue	Uninformative	9430481
117-81-7	3 Day(s), (3 Day(s))	*Sinapis alba* (White Mustard), Seedling, 5 Leaf stage, Not Reported, Not reported	Natural soil, Environmental, Spray, hand, Not Reported	Measured	0 ug/cm2 lf / 0 ug/cm2 lf / 0.44 ug/cm2 lf / 2.19 ug/cm2 lf	Physiology (Injury-Chlorosis, Response Site: Leaf/needle)	NR (0.44-2.19 ug/cm2 lf)	Skin and Connective Tissue	Uninformative	9430481
117-81-7	15 Day(s), (15 Day(s))	*Sinapis alba* (White Mustard), Seedling, 21 Days post planting/sowing, Not Reported, Not reported	Culture, Environmental, Spray, hand, Not Reported	Measured	0 ug/cm2 lf / 0 ug/cm2 lf / 3.1 ug/cm2 lf	Biochemical (Biochemistry-Chlorophyll, Response Site: Leaf/needle)	NR (3.1 ug/cm2 lf)	Mechanistic: Photosynthesis	Medium	9430481

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	15 Day(s), (15 Day(s))	*Sinapis alba* (White Mustard), Seedling, 21 Days post planting/sowing, Not Reported, Not reported	Culture, Environmental, Spray, hand, Not Reported	Measured	0 ug/cm2 lf / 0 ug/cm2 lf / 3.1 ug/cm2 lf	Accumulation (Accumulation-Residue, Response Site: Whole organism)	NR (3.1 ug/cm2 lf)	ADME (biotransformation)	Medium	9430481
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Chlorophyll, Response Site: Leaf/needle)	LOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Shoot)	NOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Root)	NOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Fluorescence, Response Site: Leaf/needle)	NOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Chlorophyll, Response Site: Leaf/needle)	NOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Chlorophyll B concentration, Response Site: Leaf/needle)	NOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Physiology (Physiology-Transpiration, Response Site: Leaf/needle)	NOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Physiology (Physiology-Carbon dioxide assimilation, Response Site: Leaf/needle)	NOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Fluorescence, Response Site: Leaf/needle)	LOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Chlorophyll B concentration, Response Site: Leaf/needle)	NOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Chlorophyll A concentration, Response Site: Leaf/needle)	NOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Catalase, Response Site: Shoot)	NOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
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117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Catalase, Response Site: Root)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Chlorophyll B concentration, Response Site: Leaf/needle)	NOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
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117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Physiology (Physiology-Photosynthesis, Response Site: Leaf/needle)	NOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Catalase, Response Site: Root)	NOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
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117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Glutathione peroxidase, Response Site: Shoot)	NOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Leaf/needle)	NOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
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117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Leaf/needle)	NR (10-40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Glutathione peroxidase, Response Site: Leaf/needle)	NR (10-40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
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117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Ascorbate peroxidase, Response Site: Shoot)	NOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Physiology (Physiology-Photosynthesis, Response Site: Leaf/needle)	NOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Catalase, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Chlorophyll A concentration, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Hydrogen peroxide, Response Site: Shoot)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
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117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Hydrogen peroxide, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Superoxide, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Root)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Hydrogen peroxide, Response Site: Shoot)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Catalase, Response Site: Root)	NR (10-40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Hydrogen peroxide, Response Site: Root)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Superoxide, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Chlorophyll A concentration, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Maturity, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Growth (Morphology-Weight, Response Site: Kernal)	LOEL (10 mg/kg dry soil)	Development/Growth	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Catalase, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Ascorbate peroxidase, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Superoxide, Response Site: Shoot)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Superoxide, Response Site: Root)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Catalase, Response Site: Shoot)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Ascorbate peroxidase, Response Site: Root)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Ascorbate peroxidase, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Superoxide, Response Site: Root)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Chlorophyll, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Ascorbate peroxidase, Response Site: Root)	NR (10-40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Ascorbate peroxidase, Response Site: Root)	NOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Superoxide, Response Site: Root)	NR (10-40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Glutathione peroxidase, Response Site: Root)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Chlorophyll B concentration, Response Site: Leaf/needle)	LOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Physiology (Physiology-Transpiration, Response Site: Leaf/needle)	LOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Physiology (Physiology-Carbon dioxide assimilation, Response Site: Leaf/needle)	LOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Chlorophyll B concentration, Response Site: Leaf/needle)	LOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Glutathione peroxidase, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Chlorophyll A concentration, Response Site: Leaf/needle)	LOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Physiology (Physiology-Photosynthesis, Response Site: Leaf/needle)	LOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Fluorescence, Response Site: Leaf/needle)	LOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Glutathione peroxidase, Response Site: Root)	LOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Shoot)	LOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Ascorbate peroxidase, Response Site: Root)	LOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Ascorbate peroxidase, Response Site: Shoot)	LOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Catalase, Response Site: Root)	LOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Catalase, Response Site: Shoot)	LOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Glutathione peroxidase, Response Site: Shoot)	LOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Leaf/needle)	LOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Ascorbate peroxidase, Response Site: Leaf/needle)	NR (10-40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Root)	LOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Root)	LOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Ascorbate peroxidase, Response Site: Shoot)	LOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Root)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Shoot)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Glutathione peroxidase, Response Site: Shoot)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Physiology (Physiology-Photosynthesis, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Superoxide, Response Site: Leaf/needle)	NR (10-40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Catalase, Response Site: Leaf/needle)	NOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Physiology (Physiology-Stomatal conductance, Response Site: Leaf/needle)	NOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Physiology (Physiology-Stomatal conductance, Response Site: Leaf/needle)	NOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Glutathione peroxidase, Response Site: Leaf/needle)	NOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Physiology (Physiology-Stomatal conductance, Response Site: Leaf/needle)	NOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Fluorescence, Response Site: Leaf/needle)	NOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Physiology (Physiology-Carbon dioxide assimilation, Response Site: Leaf/needle)	NOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Shoot)	NOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Root)	NOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Physiology (Physiology-Stomatal conductance, Response Site: Leaf/needle)	LOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Fluorescence, Response Site: Leaf/needle)	NOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Physiology (Physiology-Carbon dioxide assimilation, Response Site: Leaf/needle)	LOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Fluorescence, Response Site: Leaf/needle)	LOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Physiology (Physiology-Transpiration, Response Site: Leaf/needle)	LOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Physiology (Physiology-Photosynthesis, Response Site: Leaf/needle)	LOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Glutathione peroxidase, Response Site: Root)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Root)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA Boot stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Shoot)	LOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Hydrogen peroxide, Response Site: Root)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Hydrogen peroxide, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA seedling stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Chlorophyll, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Physiology (Physiology-Transpiration, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Physiology (Physiology-Carbon dioxide assimilation, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185
117-81-7	NA jointing stage, (NA Maturity)	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (AGROENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY AGRICULTURE, TIANJIN, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 0 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Chlorophyll B concentration, Response Site: Leaf/needle)	LOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	5493185

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Day(s), (3 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Filter paper, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml / 30 ug/ml / 40 ug/ml / 50 ug/ml	Reproduction (Reproduction-Germination, Response Site: Root)	IC10 (7.25 ug/ml)	Reproductive/Teratogenic	High	3515118
117-81-7	3 Day(s), (3 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Filter paper, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml / 30 ug/ml / 40 ug/ml / 50 ug/ml	Reproduction (Reproduction-Germination, Response Site: Root)	IC50 (43.2 ug/ml)	Reproductive/Teratogenic	High	3515118
117-81-7	3 Day(s), (3 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Filter paper, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml / 30 ug/ml / 40 ug/ml / 50 ug/ml	Reproduction (Reproduction-Germination, Response Site: Shoot)	IC50 (53.0 ug/ml)	Reproductive/Teratogenic	High	3515118
117-81-7	3 Day(s), (3 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Filter paper, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml / 30 ug/ml / 40 ug/ml / 50 ug/ml	Reproduction (Reproduction-Germination, Response Site: Not reported)	LOEL (40 ug/ml)	Reproductive/Teratogenic	High	3515118

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Day(s), (3 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Filter paper, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml / 30 ug/ml / 40 ug/ml / 50 ug/ml	Reproduction (Reproduction-Germination, Response Site: Not reported)	NOEL (30 ug/ml)	Reproductive/Teratogenic	High	3515118
117-81-7	3 Day(s), (3 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Filter paper, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml / 30 ug/ml / 40 ug/ml / 50 ug/ml	Reproduction (Reproduction-Germination, Response Site: Shoot)	IC10 (11.62 ug/ml)	Reproductive/Teratogenic	High	3515118
117-81-7	7 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Enzyme(s)-Peroxidase activity, Response Site: Root)	NR (5-20 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118
117-81-7	7 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Enzyme(s)-Peroxidase activity, Response Site: Shoot)	NR (5-20 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Biochemistry-Superoxide, Response Site: Shoot)	NOEL (5 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118
117-81-7	7 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Biochemistry-Superoxide, Response Site: Root)	NOEL (5 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118
117-81-7	7 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Root)	LOEL (5 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118
117-81-7	7 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Shoot)	LOEL (5 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Physiology (Physiology-Conductivity, Response Site: Root)	LOEL (5 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118
117-81-7	7 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Physiology (Physiology-Conductivity, Response Site: Shoot)	LOEL (5 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118
117-81-7	7 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Enzyme(s)-Catalase, Response Site: Shoot)	LOEL (5 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118
117-81-7	7 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Biochemistry-Superoxide, Response Site: Shoot)	LOEL (10 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Biochemistry-Superoxide, Response Site: Root)	LOEL (10 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118
117-81-7	7 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Biochemistry-Malondialdehyde, Response Site: Shoot)	LOEL (5 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118
117-81-7	7 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Biochemistry-Malondialdehyde, Response Site: Root)	LOEL (5 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118
117-81-7	7 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Enzyme(s)-Catalase, Response Site: Root)	LOEL (5 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Enzyme(s)-Catalase, Response Site: Root)	LOEL (5 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118
117-81-7	14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Enzyme(s)-Catalase, Response Site: Shoot)	LOEL (5 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118
117-81-7	14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Root)	LOEL (5 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118
117-81-7	14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Shoot)	LOEL (5 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Physiology (Physiology-Conductivity, Response Site: Root)	LOEL (5 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118
117-81-7	14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Physiology (Physiology-Conductivity, Response Site: Shoot)	LOEL (5 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118
117-81-7	14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Biochemistry-Superoxide, Response Site: Root)	NOEL (5 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118
117-81-7	14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Biochemistry-Superoxide, Response Site: Shoot)	NOEL (5 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Enzyme(s)-Peroxidase activity, Response Site: Root)	NR (5-20 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118
117-81-7	14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Enzyme(s)-Peroxidase activity, Response Site: Shoot)	NR (5-20 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118
117-81-7	7-14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Growth (Growth-Area,Diameter,Length, Response Site: Root)	NR (5-20 ug/ml)	Development/Growth	High	3515118
117-81-7	7-14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Growth (Morphology-Quantity, Response Site: Root,Root tips)	NR (5-20 ug/ml)	Development/Growth	High	3515118

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Biochemistry-Malondialdehyde, Response Site: Shoot)	LOEL (5 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118
117-81-7	14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Biochemistry-Malondialdehyde, Response Site: Root)	LOEL (5 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118
117-81-7	14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Biochemistry-Superoxide, Response Site: Shoot)	LOEL (10 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118
117-81-7	14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Biochemistry-Superoxide, Response Site: Root)	LOEL (10 ug/ml)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	High	3515118

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7-14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, 3 Leaf stage, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES, CHINA)	Artificial soil, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Accumulation (Accumulation-Residue, Response Site: Root,Shoot)	NR (5-20 ug/ml)	ADME (biotransformation)	High	3515118
117-81-7	7 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Biochemistry-CO2 concentration, Response Site: Not reported)	LOEL (20 ug/ml)	Mechanistic: Photosynthesis	High	3350318
117-81-7	7 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Biochemistry-CO2 concentration, Response Site: Not reported)	NOEL (10 ug/ml)	Mechanistic: Photosynthesis	High	3350318
117-81-7	7-14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Physiology (Physiology-Net photosynthetic rate, Response Site: Not reported)	NR (5-20 ug/ml)	Mechanistic: Photosynthesis	High	3350318

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7-14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Physiology (Physiology-Stomatal conductance, Response Site: Not reported)	NR (5-20 ug/ml)	Mechanistic: Photosynthesis	High	3350318
117-81-7	7-14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Physiology (Physiology-Transpiration, Response Site: Not reported)	NR (5-20 ug/ml)	Mechanistic: Photosynthesis	High	3350318
117-81-7	7-14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Growth (Growth-Height, Response Site: Whole organism)	NR (5-20 ug/ml)	Development/Growth	Medium	3350318
117-81-7	14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Biochemistry-CO2 concentration, Response Site: Not reported)	NR (5-20 ug/ml)	Mechanistic: Photosynthesis	High	3350318

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7-14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Biochemistry-Fluorescence, Response Site: Not reported)	NR (5-20 ug/ml)	Mechanistic: Photosynthesis	High	3350318
117-81-7	7-14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Growth (Growth-Weight, Response Site: Root)	NR (5-20 ug/ml)	Development/Growth	Medium	3350318
117-81-7	7-14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Biochemical (Biochemistry-Chlorophyll, Response Site: Not reported)	NR (5-20 ug/ml)	Mechanistic: Photosynthesis	High	3350318
117-81-7	7-14 Day(s), (14 Day(s))	*Triticum aestivum* (Bread Wheat), Seedling, Not Reported, Laboratory (TIANJIN ACADEMY OF AGRICULTURAL SCIENCES)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 5 ug/ml / 10 ug/ml / 20 ug/ml	Growth (Growth-Weight, Response Site: Shoot)	NR (5-20 ug/ml)	Development/Growth	Medium	3350318

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	72 Hour(s), (72 Hour(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Length, Response Site: Root)	LOEL (5 mg/kg soil)	Development/Growth	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Reproduction (Reproduction-Germination, Response Site: Not reported)	NOEL (500 mg/kg soil)	Reproductive/Teratogenic	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Biomass, Response Site: Whole organism)	LOEL (5 mg/kg soil)	Development/Growth	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Shoot)	LOEL (5 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	72 Hour(s), (72 Hour(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Growth (Growth-Length, Response Site: Shoot)	NR (5-500 mg/kg soil)	Development/Growth	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES IN NANJING)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19454 mg/kg soil / 5 mg/kg soil / 20 mg/kg soil / 100 mg/kg soil / 500 mg/kg soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Root)	LOEL (5 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
117-81-7	72 Hour(s), (72 Hour(s))	*Vigna radiata* (Mungbean), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	142.6 ug/kg dry soil / 5 mg/kg dry soil / 20 mg/kg dry soil / 100 mg/kg dry soil / 500 mg/kg dry soil	Biochemical (Biochemistry-Soluble sugar content, Response Site: Whole organism)	NR (500 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect)	High	2510954
117-81-7	72 Hour(s), (72 Hour(s))	*Vigna radiata* (Mungbean), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	142.6 ug/kg dry soil / 5 mg/kg dry soil / 20 mg/kg dry soil / 100 mg/kg dry soil / 500 mg/kg dry soil	Growth (Growth-Length, Response Site: Shoot)	EC50 (16550 mg/kg dry soil)	Development/Growth	Medium	2510954

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	72 Hour(s), (72 Hour(s))	*Vigna radiata* (Mungbean), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	142.6 ug/kg dry soil / 5 mg/kg dry soil / 20 mg/kg dry soil / 100 mg/kg dry soil / 500 mg/kg dry soil	Growth (Growth-Length, Response Site: Root)	EC50 (3969 mg/kg dry soil)	Development/Growth	Medium	2510954
117-81-7	72 Hour(s), (72 Hour(s))	*Vigna radiata* (Mungbean), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	142.6 ug/kg dry soil / 5 mg/kg dry soil / 20 mg/kg dry soil / 100 mg/kg dry soil / 500 mg/kg dry soil	Biochemical (Biochemistry-Amino acids, total free, Response Site: Whole organism)	NR (500 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect)	High	2510954
117-81-7	72 Hour(s), (72 Hour(s))	*Vigna radiata* (Mungbean), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	142.6 ug/kg dry soil / 5 mg/kg dry soil / 20 mg/kg dry soil / 100 mg/kg dry soil / 500 mg/kg dry soil	Biochemical (Biochemistry-Proline, Response Site: Root,Shoot)	NR (5-500 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect)	High	2510954
117-81-7	72 Hour(s), (72 Hour(s))	*Vigna radiata* (Mungbean), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	142.6 ug/kg dry soil / 5 mg/kg dry soil / 20 mg/kg dry soil / 100 mg/kg dry soil / 500 mg/kg dry soil	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Root,Shoot)	NR (5-500 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect)	High	2510954

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	72 Hour(s), (72 Hour(s))	*Vigna radiata* (Mungbean), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	142.6 ug/kg dry soil / 5 mg/kg dry soil / 20 mg/kg dry soil / 100 mg/kg dry soil / 500 mg/kg dry soil	Biochemical (Enzyme(s)-Polyphenol oxidase, Response Site: Root,Shoot)	NR (5-500 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect)	High	2510954
117-81-7	72 Hour(s), (72 Hour(s))	*Vigna radiata* (Mungbean), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	142.6 ug/kg dry soil / 5 mg/kg dry soil / 20 mg/kg dry soil / 100 mg/kg dry soil / 500 mg/kg dry soil	Biochemical (Enzyme(s)-Peroxidase activity, Response Site: Root,Shoot)	NR (5-500 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect)	High	2510954
117-81-7	72 Hour(s), (72 Hour(s))	*Vigna radiata* (Mungbean), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	142.6 ug/kg dry soil / 5 mg/kg dry soil / 20 mg/kg dry soil / 100 mg/kg dry soil / 500 mg/kg dry soil	Biochemical (Enzyme(s)-Ascorbate peroxidase, Response Site: Root,Shoot)	NR (5-500 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect)	High	2510954
117-81-7	72 Hour(s), (72 Hour(s))	*Vigna radiata* (Mungbean), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	142.6 ug/kg dry soil / 5 mg/kg dry soil / 20 mg/kg dry soil / 100 mg/kg dry soil / 500 mg/kg dry soil	Biochemical (Biochemistry-Protein content, Response Site: Root,Shoot)	NR (5-500 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect)	High	2510954

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Terrestrial: Vascular plants Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	72 Hour(s), (72 Hour(s))	*Vigna radiata* (Mungbean), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	142.6 ug/kg dry soil / 5 mg/kg dry soil / 20 mg/kg dry soil / 100 mg/kg dry soil / 500 mg/kg dry soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Root,Shoot)	NR (5-500 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect)	High	2510954
117-81-7	72 Hour(s), (72 Hour(s))	*Vigna radiata* (Mungbean), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	142.6 ug/kg dry soil / 5 mg/kg dry soil / 20 mg/kg dry soil / 100 mg/kg dry soil / 500 mg/kg dry soil	Biochemical (Biochemistry-Glutathione, total, Response Site: Root,Shoot)	NR (5-500 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect)	High	2510954
117-81-7	72 Hour(s), (72 Hour(s))	*Vigna radiata* (Mungbean), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	142.6 ug/kg dry soil / 5 mg/kg dry soil / 20 mg/kg dry soil / 100 mg/kg dry soil / 500 mg/kg dry soil	Growth (Growth-Biomass, Response Site: Whole organism)	NR (5-500 mg/kg dry soil)	Development/Growth	Medium	2510954
117-81-7	72 Hour(s), (72 Hour(s))	*Vigna radiata* (Mungbean), Seed, Not Reported, Laboratory (CHINESE ACADEMY OF AGRICULTURAL SCIENCES)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	142.6 ug/kg dry soil / 5 mg/kg dry soil / 20 mg/kg dry soil / 100 mg/kg dry soil / 500 mg/kg dry soil	Reproduction (Reproduction-Germination, Response Site: Not reported)	EC50 (42774 mg/kg dry soil)	Reproductive/Teratogenic	Medium	2510954

* If multiple extractions contained all identical information except the effect level, extraction rows were collapsed and the differing levels are listed by comma in this row.

Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	5-7 Days post-emergence, (5-8 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 25 Male organisms	Unmeasured	0 uM diet / 200 uM diet	Cellular (Genetics-Insulin-like peptide 5 mRNA, Response Site: Head)	LOEL (200 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5495570
117-81-7	5-7 Days post-emergence, (5-8 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 25 Male organisms	Unmeasured	0 uM diet / 200 uM diet	Cellular (Genetics-Insulin-like peptide 2 mRNA, Response Site: Head)	NOEL (200 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5495570
117-81-7	5-8 Days post-emergence, (5-8 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 8 Male organisms	Unmeasured	0 uM diet / 200 uM diet	Biochemical (Biochemistry-Lipid, Response Site: Whole organism)	LOEL (200 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5495570
117-81-7	5-7 Days post-emergence, (5-8 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 10 Male organisms	Unmeasured	0 uM diet / 200 uM diet	Behavior (Avoidance-Food avoidance, Response Site: Not reported)	NOEL (200 uM diet)	Behavioral	Medium	5495570
117-81-7	5-7 Days post-emergence, (5-8 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 32 Male organisms	Unmeasured	0 uM diet / 200 uM diet	Behavior (Behavior-Activity, general, Response Site: Not reported)	NOEL (200 uM diet)	Behavioral	Medium	5495570

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	5-8 Days post-emergence, (5-8 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 6 Male organisms	Unmeasured	0 uM diet / 200 uM diet	Biochemical (Biochemistry-Trehalose, Response Site: Hemolymph)	NOEL (200 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5495570
117-81-7	5-7 Days post-emergence, (5-8 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 32 Male organisms	Unmeasured	0 uM diet / 200 uM diet	Behavior (Behavior-Sleeping, Response Site: Not reported)	NOEL (200 uM diet)	Behavioral	Medium	5495570
117-81-7	5-7 Days post-emergence, (5-8 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 6 Male organisms	Unmeasured	0 uM diet / 200 uM diet	Biochemical (Biochemistry-Glycogen, Response Site: Whole organism)	NOEL (200 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5495570
117-81-7	5-7 Days post-emergence, (5-8 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 6 Male organisms	Unmeasured	0 uM diet / 200 uM diet	Biochemical (Biochemistry-Trehalose, Response Site: Whole organism)	NOEL (200 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5495570
117-81-7	5-7 Days post-emergence, (5-8 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 10 Male organisms	Unmeasured	0 uM diet / 200 uM diet	Cellular (Genetics-Adipokinetic hormone mRNA, Response Site: Thorax and abdomen)	NOEL (200 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5495570

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	5-7 Days post-emergence, (5-8 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 10 Male organisms	Unmeasured	0 uM diet / 200 uM diet	Cellular (Genetics-Adipokinetic hormone receptor mRNA, Response Site: Thorax and abdomen)	NOEL (200 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5495570
117-81-7	5-7 Days post-emergence, (5-8 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 10 Male organisms	Unmeasured	0 uM diet / 200 uM diet	Cellular (Genetics-Insulin-like peptide 6 mRNA, Response Site: Thorax and abdomen)	NOEL (200 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5495570
117-81-7	5-7 Days post-emergence, (5-8 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 25 Male organisms	Unmeasured	0 uM diet / 200 uM diet	Cellular (Genetics-insl3 (insulin-like peptide 3) mRNA, Response Site: Head)	NOEL (200 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5495570
117-81-7	5-8 Days post-emergence, (5-8 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 6 Male organisms	Unmeasured	0 uM diet / 200 uM diet	Biochemical (Biochemistry-Glucose, Response Site: Hemolymph)	NOEL (200 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5495570
117-81-7	5-8 Days post-emergence, (5-8 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 6 Male organisms	Unmeasured	0 uM diet / 200 uM diet	Biochemical (Biochemistry-Glycogen, Response Site: Whole organism)	NOEL (200 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5495570

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	5-7 Days post-emergence, (5-8 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 10 Male organisms	Unmeasured	0 uM diet / 200 uM diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (200 uM diet)	Behavioral	Medium	5495570
117-81-7	5-7 Days post-emergence, (5-8 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 25 Male organisms	Unmeasured	0 uM diet / 200 uM diet	Cellular (Genetics-Insulin receptor mRNA, Response Site: Head)	LOEL (200 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5495570
117-81-7	5-7 Days post-emergence, (5-8 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 10 Male organisms	Unmeasured	0 uM diet / 200 uM diet	Cellular (Genetics-Insulin receptor mRNA, Response Site: Thorax and abdomen)	LOEL (200 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5495570
117-81-7	5-8 Days post-emergence, (5-8 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 6 Male organisms	Unmeasured	0 uM diet / 200 uM diet	Biochemical (Biochemistry-Trehalose, Response Site: Whole organism)	NOEL (200 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5495570
117-81-7	5-7 Days post-emergence, (5-8 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 6 Male organisms	Unmeasured	0 uM diet / 200 uM diet	Biochemical (Biochemistry-Glucose, Response Site: Hemolymph)	LOEL (200 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5495570

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	5-7 Days post-emergence, (5-8 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 8 Male organisms	Unmeasured	0 uM diet / 200 uM diet	Biochemical (Biochemistry-Lipid, Response Site: Whole organism)	LOEL (200 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5495570
117-81-7	7.5-10.333 Days post-emergence, (7.5-10.333 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 32 Male organisms	Unmeasured	0 uM diet / 20 uM diet / 60 uM diet / 200 uM diet / 600 uM diet / 2000 uM diet	Mortality (Mortality-Survival, Response Site: Not reported)	NR (20-2000 uM diet)	Mortality	Medium	5495570
117-81-7	5-7 Days post-emergence, (5-8 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (BLOOMINGTON STOCK CENTRE, INDIANA, USA)	No substrate, Oral (diet, drink, gavage), Food, 6 Male organisms	Unmeasured	0 uM diet / 200 uM diet	Biochemical (Biochemistry-Trehalose, Response Site: Hemolymph)	LOEL (200 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5495570
117-81-7	1 Generation, (1 Generation)	*Drosophila melanogaster* (Fruit Fly), Larva (Measured in: F1 generation), Not Reported, Laboratory	Culture, Environmental, Environmental, unspecified, NA F1 generation	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Population (Population-Sex ratio, Response Site: Not reported)	NOEL (1 % v/v)	Reproductive/Teratogenic	Low	5495717
117-81-7	1 Generation, (1 Generation)	*Drosophila melanogaster* (Fruit Fly), Larva (Measured in: F1 generation), Not Reported, Laboratory	Culture, Environmental, Environmental, unspecified, NA F1 generation	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEL (1 % v/v)	Reproductive/Teratogenic	Low	5495717

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	1 Generation, (1 Generation)	*Drosophila melanogaster* (Fruit Fly), Larva (Measured in: female, 1st generation), Not Reported, Laboratory	Culture, Environmental, Environmental, unspecified, NA female, 1st generation	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Reproduction (Reproduction-Weight, Response Site: Whole organism)	NOEL (1 % v/v)	Reproductive/Teratogenic	Low	5495717
117-81-7	1 Generation, (1 Generation)	*Drosophila melanogaster* (Fruit Fly), Larva (Measured in: male, 1st generation), Not Reported, Laboratory	Culture, Environmental, Environmental, unspecified, NA male, 1st generation	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Reproduction (Reproduction-Weight, Response Site: Whole organism)	NOEL (1 % v/v)	Reproductive/Teratogenic	Low	5495717
117-81-7	7 Day(s), (7 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Hours post-emergence (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory	Culture, Environmental, Environmental, unspecified, NA female, 1st generation	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Reproduction (Reproduction-Weight, Response Site: Whole organism)	NOEL (1 % v/v)	Reproductive/Teratogenic	Low	5495717
117-81-7	7 Day(s), (7 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Hours post-emergence (Measured in: F1 generation), Both, Laboratory	Culture, Environmental, Environmental, unspecified, NA F1 generation	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEL (1 % v/v)	Reproductive/Teratogenic	Low	5495717
117-81-7	7 Day(s), (7 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Hours post-emergence (Measured in: F1 generation), Both, Laboratory	Culture, Environmental, Environmental, unspecified, NA F1 generation	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Population (Population-Sex ratio, Response Site: Not reported)	NOEL (1 % v/v)	Reproductive/Teratogenic	Low	5495717

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117-81-7	7 Day(s), (7 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Hours post-emergence (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory	Culture, Environmental, Environmental, unspecified, NA male, 1st generation	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Reproduction (Reproduction-Weight, Response Site: Whole organism)	NOEL (1 % v/v)	Reproductive/Teratogenic	Low	5495717
117-81-7	25 Day(s), (25 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Hours post-emergence (Measured in: male, 1st generation), Female (Measured in: male, 1st generation), Laboratory	Culture, Environmental, Environmental, unspecified, NA male, 1st generation	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Reproduction (Reproduction-Weight, Response Site: Whole organism)	LOEL (0.5 % v/v)	Reproductive/Teratogenic	Low	5495717
117-81-7	25 Day(s), (25 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Hours post-emergence (Measured in: F1 generation), Female, Laboratory	Culture, Environmental, Environmental, unspecified, NA F1 generation	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	LOEL (1 % v/v)	Reproductive/Teratogenic	Low	5495717
117-81-7	25 Day(s), (25 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Hours post-emergence (Measured in: F1 generation), Female, Laboratory	Culture, Environmental, Environmental, unspecified, NA F1 generation	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Population (Population-Sex ratio, Response Site: Not reported)	NOEL (1 % v/v)	Reproductive/Teratogenic	Low	5495717

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117-81-7	25 Day(s), (25 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Hours post-emergence (Measured in: F1 generation), Male, Laboratory	Culture, Environmental, Environmental, unspecified, NA F1 generation	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Population (Population-Sex ratio, Response Site: Not reported)	NOEL (1 % v/v)	Reproductive/Teratogenic	Low	5495717
117-81-7	25 Day(s), (25 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Hours post-emergence (Measured in: male, 1st generation), Female (Measured in: male, 1st generation), Laboratory	Culture, Environmental, Environmental, unspecified, NA male, 1st generation	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Reproduction (Reproduction-Weight, Response Site: Whole organism)	NOEL (0.1 % v/v)	Reproductive/Teratogenic	Low	5495717
117-81-7	25 Day(s), (25 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Hours post-emergence (Measured in: male, 1st generation), Male, Laboratory	Culture, Environmental, Environmental, unspecified, NA male, 1st generation	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Reproduction (Reproduction-Weight, Response Site: Whole organism)	NOEL (0.5 % v/v)	Reproductive/Teratogenic	Low	5495717
117-81-7	25 Day(s), (25 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Hours post-emergence (Measured in: male, 1st generation), Male, Laboratory	Culture, Environmental, Environmental, unspecified, NA male, 1st generation	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Reproduction (Reproduction-Weight, Response Site: Whole organism)	LOEL (1 % v/v)	Reproductive/Teratogenic	Low	5495717
117-81-7	25 Day(s), (25 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Hours post-emergence (Measured in: F1 generation), Female, Laboratory	Culture, Environmental, Environmental, unspecified, NA F1 generation	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEL (0.5 % v/v)	Reproductive/Teratogenic	Low	5495717

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117-81-7	25 Day(s), (25 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Hours post-emergence (Measured in: female, 1st generation), Female, Laboratory	Culture, Environmental, Environmental, unspecified, NA female, 1st generation	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Reproduction (Reproduction-Weight, Response Site: Whole organism)	NOEL (1 % v/v)	Reproductive/Teratogenic	Low	5495717
117-81-7	25 Day(s), (25 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Hours post-emergence (Measured in: female, 1st generation), Male (Measured in: female, 1st generation), Laboratory	Culture, Environmental, Environmental, unspecified, NA female, 1st generation	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Reproduction (Reproduction-Weight, Response Site: Whole organism)	NOEL (1 % v/v)	Reproductive/Teratogenic	Low	5495717
117-81-7	25 Day(s), (25 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Hours post-emergence (Measured in: F1 generation), Male, Laboratory	Culture, Environmental, Environmental, unspecified, NA F1 generation	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEL (1 % v/v)	Reproductive/Teratogenic	Low	5495717
117-81-7	78 Day(s), (78 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <48 Hours post-emergence, Male, Laboratory	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Mortality (Mortality-Lifespan, Response Site: Not reported)	LOEL (0.1 % v/v)	Mortality	Low	5495717
117-81-7	3-78 Day(s), (78 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <48 Hours post-emergence, Male, Laboratory	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Mortality (Mortality-Survival, Response Site: Not reported)	NR (0.1-1 % v/v)	Mortality	Low	5495717

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117-81-7	86 Day(s), (86 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <48 Hours post-emergence, Female, Laboratory	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Mortality (Mortality-Lifespan, Response Site: Not reported)	LOEL (0.1 % v/v)	Mortality	Low	5495717
117-81-7	3-86 Day(s), (86 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <48 Hours post-emergence, Female, Laboratory	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 % v/v / 0.1 % v/v / 0.5 % v/v / 1 % v/v	Mortality (Mortality-Survival, Response Site: Not reported)	NR (0.1-1 % v/v)	Mortality	Low	5495717
117-81-7	3 Larval stage index, (3 Larval stage index)	*Drosophila melanogaster* (Fruit Fly), Embryo, Not Reported, Laboratory	Culture, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 0.2 % diet / 0.4 % diet	Physiology (Physiology-Electrophysiological response, Response Site: Muscle)	LOEL (0.4 % diet)	Neurological	High	5494836
117-81-7	3 Larval stage index, (3 Larval stage index)	*Drosophila melanogaster* (Fruit Fly), Embryo, Not Reported, Laboratory	Culture, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 0.2 % diet / 0.4 % diet	Physiology (Physiology-Electrophysiological response, Response Site: Muscle)	NOEL (0.2 % diet)	Neurological	High	5494836
117-81-7	3 Larval stage index, (3 Larval stage index)	*Drosophila melanogaster* (Fruit Fly), Embryo, Not Reported, Laboratory	Culture, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 0.2 % diet / 0.4 % diet	Physiology (Physiology-Electrophysiological response, Response Site: Muscle)	NOEL (0.4 % diet)	Neurological	High	5494836
117-81-7	3 Larval stage index, (3 Larval stage index)	*Drosophila melanogaster* (Fruit Fly), Embryo, Not Reported, Laboratory	Culture, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 0.2 % diet / 0.4 % diet	Physiology (Physiology-Electrophysiological response, Response Site: Muscle)	LOEL (0.2 % diet)	Neurological	High	5494836
117-81-7	16 Hour(s), (16 Hour(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Not Reported, Laboratory	Culture, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 0.05 % diet / 0.1 % diet / 0.4 % diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (0.4 % diet)	Behavioral	High	5494836

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117-81-7	7 Day(s), (7 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Male, Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 % diet / 0.2 % diet / 0.4 % diet	Cellular (Genetics-Serpin 28F mRNA, Response Site: Not reported)	LOEL (0.2 % diet)	Mechanistic: Cell signaling/function	High	5494836
117-81-7	7 Day(s), (7 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Male, Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 % diet / 0.2 % diet / 0.4 % diet	Cellular (Genetics-Ovulin mRNA, Response Site: Not reported)	LOEL (0.2 % diet)	Mechanistic: Cell signaling/function	High	5494836
117-81-7	7 Day(s), (7 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Male, Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 % diet / 0.2 % diet / 0.4 % diet	Cellular (Genetics-Accessory gland protein 62F mRNA, Response Site: Not reported)	LOEL (0.2 % diet)	Mechanistic: Cell signaling/function	High	5494836
117-81-7	7 Day(s), (7 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Male, Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 % diet / 0.2 % diet / 0.4 % diet	Cellular (Genetics-Accessory gland protein 36DE mRNA, Response Site: Not reported)	LOEL (0.2 % diet)	Mechanistic: Cell signaling/function	High	5494836
117-81-7	7 Day(s), (7 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Male, Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 % diet / 0.2 % diet / 0.4 % diet	Cellular (Genetics-Smooth mRNA, Response Site: Not reported)	LOEL (0.2 % diet)	Mechanistic: Cell signaling/function	High	5494836
117-81-7	7 Day(s), (7 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Male, Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 % diet / 0.2 % diet / 0.4 % diet	Cellular (Genetics-Serpin 38F mRNA, Response Site: Not reported)	LOEL (0.2 % diet)	Mechanistic: Cell signaling/function	High	5494836
117-81-7	7 Day(s), (7 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Male, Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 % diet / 0.2 % diet / 0.4 % diet	Cellular (Genetics-Sex peptide mRNA, Response Site: Not reported)	LOEL (0.2 % diet)	Mechanistic: Cell signaling/function	High	5494836

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117-81-7	11 Day(s), (11 Day(s))	*Drosophila melanogaster* (Fruit Fly), Post-emergence, Both (Measured in: Female organisms), Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Female organisms	Unmeasured	0 % diet / 0.1 % diet / 0.2 % diet / 0.4 % diet	Reproduction (Reproduction-Mating index, Response Site: Not reported)	NOEL (0.1 % diet)	Reproductive/Teratogenic	High	5494836
117-81-7	11 Day(s), (11 Day(s))	*Drosophila melanogaster* (Fruit Fly), Post-emergence, Both (Measured in: Female organisms), Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Female organisms	Unmeasured	0 % diet / 0.1 % diet / 0.2 % diet / 0.4 % diet	Reproduction (Reproduction-Mating index, Response Site: Not reported)	LOEL (0.2 % diet)	Reproductive/Teratogenic	High	5494836
117-81-7	<=20 Day(s), (20 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Both (Measured in: Female organisms), Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Female organisms	Unmeasured	0 % diet / 0.10 % diet / 0.40 % diet	Reproduction (Reproduction-Courtship behavior, Response Site: Not reported)	NOEL (0.40 % diet)	Reproductive/Teratogenic	High	5494836
117-81-7	<=20 Day(s), (20 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Both (Measured in: Male organisms), Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 % diet / 0.10 % diet / 0.40 % diet	Reproduction (Reproduction-Courtship behavior, Response Site: Not reported)	NOEL (0.10 % diet)	Reproductive/Teratogenic	High	5494836
117-81-7	<=20 Day(s), (20 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Both (Measured in: Female organisms), Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Female organisms	Unmeasured	0 % diet / 0.10 % diet / 0.40 % diet	Reproduction (Reproduction-Courtship behavior, Response Site: Not reported)	NOEL (0.10 % diet)	Reproductive/Teratogenic	High	5494836
117-81-7	<=20 Day(s), (20 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Both (Measured in: Male organisms), Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 % diet / 0.10 % diet / 0.40 % diet	Reproduction (Reproduction-Courtship behavior, Response Site: Not reported)	LOEL (0.40 % diet)	Reproductive/Teratogenic	High	5494836

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117-81-7	<=20 Day(s), (20 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Both (Measured in: Female organisms), Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Female organisms	Unmeasured	0 % diet / 0.10 % diet / 0.40 % diet	Reproduction (Reproduction-Courtship behavior, Response Site: Not reported)	LOEL (0.40 % diet)	Reproductive/Teratogenic	High	5494836
117-81-7	20 Day(s), (20 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Both (Measured in: Female organisms), Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Female organisms	Unmeasured	0 % diet / 0.1 % diet / 0.4 % diet	Physiology (Physiology-Electroretinography wave amplitude, Response Site: Eye)	NR (0.1-0.4 % diet)	Ocular and Sensory	High	5494836
117-81-7	20 Day(s), (20 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Both (Measured in: Female organisms), Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Female organisms	Unmeasured	0 % diet / 0.1 % diet / 0.4 % diet	Physiology (Physiology-Electroretinography wave amplitude, Response Site: Eye)	NOEL (0.4 % diet)	Ocular and Sensory	High	5494836
117-81-7	20 Day(s), (20 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Both (Measured in: Male organisms), Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 % diet / 0.1 % diet / 0.4 % diet	Physiology (Physiology-Electroretinography wave amplitude, Response Site: Eye)	LOEL (0.1 % diet)	Ocular and Sensory	High	5494836
117-81-7	20 Day(s), (20 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Both (Measured in: Female organisms), Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Female organisms	Unmeasured	0 % diet / 0.1 % diet / 0.4 % diet	Physiology (Physiology-Electroretinography wave amplitude, Response Site: Eye)	LOEL (0.1 % diet)	Ocular and Sensory	High	5494836
117-81-7	<=20 Day(s), (20 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Both (Measured in: Male organisms), Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 % diet / 0.10 % diet / 0.40 % diet	Reproduction (Reproduction-Courtship behavior, Response Site: Not reported)	NOEL (0.40 % diet)	Reproductive/Teratogenic	High	5494836

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	42 Day(s), (82 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Both (Measured in: Male organisms), Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 % diet / 0.05 % diet / 0.1 % diet / 0.2 % diet / 0.4 % diet	Behavior (Behavior-Distance moved, change in direct movement, Response Site: Not reported)	LOEL (0.2 % diet)	Behavioral	High	5494836
117-81-7	42 Day(s), (82 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Both (Measured in: Male organisms), Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 % diet / 0.05 % diet / 0.1 % diet / 0.2 % diet / 0.4 % diet	Behavior (Behavior-Distance moved, change in direct movement, Response Site: Not reported)	NOEL (0.1 % diet)	Behavioral	High	5494836
117-81-7	49 Day(s), (82 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Both (Measured in: Male organisms), Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 % diet / 0.05 % diet / 0.1 % diet / 0.2 % diet / 0.4 % diet	Mortality (Mortality-Lifespan, Response Site: Not reported)	LOEL (0.2 % diet)	Mortality	High	5494836
117-81-7	49 Day(s), (82 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Both (Measured in: Female organisms), Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Female organisms	Unmeasured	0 % diet / 0.05 % diet / 0.1 % diet / 0.2 % diet / 0.4 % diet	Behavior (Behavior-Distance moved, change in direct movement, Response Site: Not reported)	LOEL (0.1 % diet)	Behavioral	High	5494836
117-81-7	49 Day(s), (82 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Both (Measured in: Male organisms), Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 % diet / 0.05 % diet / 0.1 % diet / 0.2 % diet / 0.4 % diet	Mortality (Mortality-Lifespan, Response Site: Not reported)	NOEL (0.1 % diet)	Mortality	High	5494836
117-81-7	49 Day(s), (82 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Both (Measured in: Female organisms), Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Female organisms	Unmeasured	0 % diet / 0.05 % diet / 0.1 % diet / 0.2 % diet / 0.4 % diet	Behavior (Behavior-Distance moved, change in direct movement, Response Site: Not reported)	NOEL (0.05 % diet)	Behavioral	High	5494836

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	56-60 Day(s), (82 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Both (Measured in: Female organisms), Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Female organisms	Unmeasured	0 % diet / 0.05 % diet / 0.1 % diet / 0.2 % diet / 0.4 % diet	Mortality (Mortality-Lifespan, Response Site: Not reported)	NOEL (0.2 % diet)	Mortality	High	5494836
117-81-7	56-60 Day(s), (82 Day(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Both (Measured in: Female organisms), Laboratory	Culture, Oral (diet, drink, gavage), Food, NA Female organisms	Unmeasured	0 % diet / 0.05 % diet / 0.1 % diet / 0.2 % diet / 0.4 % diet	Mortality (Mortality-Lifespan, Response Site: Not reported)	LOEL (0.4 % diet)	Mortality	High	5494836
117-81-7	>1-8 Day(s), (>4->8 Day(s))	*Drosophila sp.* (Fruit Fly), Multiple, Not Reported, Laboratory (POST EMERGENCE FROM LARVAE STAGE DURING TEST)	Media mixture (with comment), Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 mM / 0 mM / 10 mM / 20 mM	Cellular (Genetics-Mutation, Response Site: Not reported)	NR (10-20 mM)	Mechanistic: Genotox (including DNA repair)	Medium	200657
117-81-7	21 Day(s), (21 Day(s))	*Folsomia fimetaria* (Springtail), Adult, 23-26 Day(s), Both, Laboratory (LAB CULTURE ESTABLISHED FROM FIELD-COLLECTED ANIMALS)	Natural soil, Environmental, Environmental, unspecified, NA Adult	Unmeasured	0 mg/kg dry soil / 1000 mg/kg dry soil / 2000 mg/kg dry soil / 3000 mg/kg dry soil / 4000 mg/kg dry soil / 5000 mg/kg dry soil	Reproduction (Reproduction-Reproduction, general, Response Site: Not reported)	EC50 (>5000 mg/kg dry soil)	Reproductive/Teratogenic	Medium	789786
117-81-7	21 Day(s), (50 Day(s))	*Folsomia fimetaria* (Springtail), Juvenile, 0-1 Day(s), Both, Laboratory (LAB CULTURE ESTABLISHED FROM FIELD-COLLECTED ANIMALS)	Natural soil, Environmental, Environmental, unspecified, NA Juvenile	Unmeasured	0 mg/kg dry soil / 100 mg/kg dry soil / 250 mg/kg dry soil / 500 mg/kg dry soil / 1000 mg/kg dry soil	Growth (Development-Molting, Response Site: Not reported)	EC10 (>1000 mg/kg dry soil)	Development/Growth	Medium	789786

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	21 Day(s), (50 Day(s))	*Folsomia fimetaria* (Springtail), Juvenile, 0-1 Day(s), Both, Laboratory (LAB CULTURE ESTABLISHED FROM FIELD-COLLECTED ANIMALS)	Natural soil, Environmental, Environmental, unspecified, NA Juvenile	Unmeasured	0 mg/kg dry soil / 100 mg/kg dry soil / 250 mg/kg dry soil / 500 mg/kg dry soil / 1000 mg/kg dry soil	Growth (Development-Molting, Response Site: Not reported)	EC50 (>1000 mg/kg dry soil)	Development/Growth	Medium	789786
117-81-7	21 Day(s), (50 Day(s))	*Folsomia fimetaria* (Springtail), Juvenile, 0-1 Day(s), Both, Laboratory (LAB CULTURE ESTABLISHED FROM FIELD-COLLECTED ANIMALS)	Natural soil, Environmental, Environmental, unspecified, NA Juvenile	Unmeasured	0 mg/kg dry soil / 100 mg/kg dry soil / 250 mg/kg dry soil / 500 mg/kg dry soil / 1000 mg/kg dry soil	Mortality (Mortality-Mortality, Response Site: Not reported)	LC10 (>1000 mg/kg dry soil)	Mortality	Medium	789786
117-81-7	21 Day(s), (50 Day(s))	*Folsomia fimetaria* (Springtail), Juvenile, 0-1 Day(s), Both, Laboratory (LAB CULTURE ESTABLISHED FROM FIELD-COLLECTED ANIMALS)	Natural soil, Environmental, Environmental, unspecified, NA Juvenile	Unmeasured	0 mg/kg dry soil / 100 mg/kg dry soil / 250 mg/kg dry soil / 500 mg/kg dry soil / 1000 mg/kg dry soil	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>1000 mg/kg dry soil)	Mortality	Medium	789786
117-81-7	21 Day(s), (50 Day(s))	*Folsomia fimetaria* (Springtail), Juvenile, 0-1 Day(s), Both, Laboratory (LAB CULTURE ESTABLISHED FROM FIELD-COLLECTED ANIMALS)	Natural soil, Environmental, Environmental, unspecified, 14 Juvenile	Unmeasured	0 mg/kg dry soil / 100 mg/kg dry soil / 250 mg/kg dry soil / 500 mg/kg dry soil / 1000 mg/kg dry soil	Growth (Development-Molting, Response Site: Not reported)	NOEL (1000 mg/kg dry soil)	Development/Growth	Medium	789786

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	21 Day(s), (21 Day(s))	*Folsomia fimetaria* (Springtail), Adult, 23-26 Day(s), Both, Laboratory (LAB CULTURE ESTABLISHED FROM FIELD-COLLECTED ANIMALS)	Natural soil, Environmental, Environmental, unspecified, NA Adult	Unmeasured	0 mg/kg dry soil / 1000 mg/kg dry soil / 2000 mg/kg dry soil / 3000 mg/kg dry soil / 4000 mg/kg dry soil / 5000 mg/kg dry soil	Reproduction (Reproduction-Reproduction, general, Response Site: Not reported)	EC10 (>5000 mg/kg dry soil)	Reproductive/Teratogenic	Medium	789786
117-81-7	21 Day(s), (21 Day(s))	*Folsomia fimetaria* (Springtail), Adult, 23-26 Day(s), Both, Laboratory (LAB CULTURE ESTABLISHED FROM FIELD-COLLECTED ANIMALS)	Natural soil, Environmental, Environmental, unspecified, NA Adult	Unmeasured	0 mg/kg dry soil / 1000 mg/kg dry soil / 2000 mg/kg dry soil / 3000 mg/kg dry soil / 4000 mg/kg dry soil / 5000 mg/kg dry soil	Mortality (Mortality-Mortality, Response Site: Not reported)	LC10 (>5000 mg/kg dry soil)	Mortality	Medium	789786
117-81-7	21 Day(s), (21 Day(s))	*Folsomia fimetaria* (Springtail), Adult, 23-26 Day(s), Both, Laboratory (LAB CULTURE ESTABLISHED FROM FIELD-COLLECTED ANIMALS)	Natural soil, Environmental, Environmental, unspecified, NA Adult	Unmeasured	0 mg/kg dry soil / 1000 mg/kg dry soil / 2000 mg/kg dry soil / 3000 mg/kg dry soil / 4000 mg/kg dry soil / 5000 mg/kg dry soil	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>5000 mg/kg dry soil)	Mortality	Medium	789786
117-81-7	50 Day(s), (50 Day(s))	*Folsomia fimetaria* (Springtail), Juvenile, 0-1 Day(s), Both, Laboratory (LAB CULTURE ESTABLISHED FROM FIELD-COLLECTED ANIMALS)	Natural soil, Environmental, Environmental, unspecified, NA Juvenile	Unmeasured	0 mg/kg dry soil / 100 mg/kg dry soil / 250 mg/kg dry soil / 500 mg/kg dry soil / 1000 mg/kg dry soil	Growth (Growth-Length, Response Site: Whole organism)	EC10 (>1000 mg/kg dry soil)	Development/Growth	Medium	789786

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	50 Day(s), (50 Day(s))	*Folsomia fimetaria* (Springtail), Juvenile, 0-1 Day(s), Both, Laboratory (LAB CULTURE ESTABLISHED FROM FIELD-COLLECTED ANIMALS)	Natural soil, Environmental, Environmental, unspecified, NA Juvenile	Unmeasured	0 mg/kg dry soil / 100 mg/kg dry soil / 250 mg/kg dry soil / 500 mg/kg dry soil / 1000 mg/kg dry soil	Growth (Growth-Length, Response Site: Whole organism)	EC50 (>1000 mg/kg dry soil)	Development/Growth	Medium	789786
117-81-7	30 Minute(s), (30 Minute(s))	*Lasius niger* (Black Garden Ant), Not reported, Female, Wild (COLLECTED FROM AN ORCHARD NEAR TOURS, AZAY SUR CHEY, FRANCE, IN JUNE 2011 AND 2012)	No substrate, Oral (diet, drink, gavage), Choice, Not Reported	Unmeasured	0 ng/200 mg diet / 2 ng/200 mg diet	Behavior (Feeding behavior-Feeding behavior, Response Site: Not reported)	NOEL (2 ng/200 mg diet)	Behavioral	High	2345940
117-81-7	30 Minute(s), (30 Minute(s))	*Lasius niger* (Black Garden Ant), Not reported, Female, Wild (COLLECTED FROM AN ORCHARD NEAR TOURS, AZAY SUR CHEY, FRANCE, IN JUNE 2011 AND 2012)	No substrate, Oral (diet, drink, gavage), Choice, Not Reported	Unmeasured	0 ng/200 mg diet / 2 ng/200 mg diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEL (2 ng/200 mg diet)	Behavioral	High	2345940

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	30 Minute(s), (30 Minute(s))	*Lasius niger* (Black Garden Ant), Not reported, Female, Wild (COLLECTED FROM AN ORCHARD NEAR TOURS, AZAY SUR CHEY, FRANCE, IN JUNE 2011 AND 2012)	No substrate, Oral (diet, drink, gavage), Choice, Not Reported	Unmeasured	0 ng/200 mg diet / 2 ng/200 mg diet	Behavior (Feeding behavior-Feeding behavior, Response Site: Not reported)	LOEL (2 ng/200 mg diet)	Behavioral	High	2345940
117-81-7	24 Hour(s), (48 Hour(s))	*Lasius niger* (Black Garden Ant), Not reported, Female, Wild (COLLECTED FROM AN ORCHARD NEAR TOURS, AZAY SUR CHEY, FRANCE, IN JUNE 2011 AND 2012)	No substrate, Topical, Topical, general, Not Reported	Unmeasured	0 ng/ul / 0 ng/ul / 2 ng/ul	Biochemical (Biochemistry-Malondialdehyde, Response Site: Not reported)	NOEL (2 ng/ul)	Mechanistic: Oxidative stress (including redox biology)	High	2345940
117-81-7	48 Hour(s), (48 Hour(s))	*Lasius niger* (Black Garden Ant), Not reported, Female, Wild (COLLECTED FROM AN ORCHARD NEAR TOURS, AZAY SUR CHEY, FRANCE, IN JUNE 2011 AND 2012)	No substrate, Topical, Topical, general, Not Reported	Unmeasured	0 ng/ul / 0 ng/ul / 2 ng/ul	Biochemical (Biochemistry-Malondialdehyde, Response Site: Not reported)	NOEL (2 ng/ul)	Mechanistic: Oxidative stress (including redox biology)	High	2345940

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	1-7 Day(s), (7 Day(s))	*Lasius niger* (Black Garden Ant), Not reported, Female, Wild (COLLECTED FROM AN ORCHARD NEAR TOURS, AZAY SUR CHEY, FRANCE, IN JUNE 2011 AND 2012)	No substrate, Topical, Topical, general, Not Reported	Unmeasured	0 ng/ul / 2 ng/ul	Cellular (Genetics-16S ribosomal RNA,Defensin 1 mRNA,Histone H2A mRNA,Peptidoglycan recognition protein mRNA,Superoxide dismutase 1 mRNA,Vitellogenin mRNA, Response Site: Abdomen,Ovaries,Whole organism)	NR (2 ng/ul)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Epigenetics	Medium	2345940
117-81-7	1 Week(s), (5 Week(s))	*Lasius niger* (Black Garden Ant), Not reported, Female, Wild (COLLECTED DURING SWARMING FLIGHT FROM AN ORCHARD NEAR TOURS, AZAY SUR CHEY, FRANCE, IN JULY 2011)	No substrate, Topical, Topical, general, Not Reported	Unmeasured	0 ng/ul / 0 ng/ul / 2 ng/ul	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEL (2 ng/ul)	Reproductive/Teratogenic	High	2345940
117-81-7	2 Week(s), (5 Week(s))	*Lasius niger* (Black Garden Ant), Not reported, Female, Wild (COLLECTED DURING SWARMING FLIGHT FROM AN ORCHARD NEAR TOURS, AZAY SUR CHEY, FRANCE, IN JULY 2011)	No substrate, Topical, Topical, general, Not Reported	Unmeasured	0 ng/ul / 0 ng/ul / 2 ng/ul	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEL (2 ng/ul)	Reproductive/Teratogenic	High	2345940

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Week(s), (5 Week(s))	*Lasius niger* (Black Garden Ant), Not reported, Female, Wild (COLLECTED DURING SWARMING FLIGHT FROM AN ORCHARD NEAR TOURS, AZAY SUR CHEY, FRANCE, IN JULY 2011)	No substrate, Topical, Topical, general, Not Reported	Unmeasured	0 ng/ul / 0 ng/ul / 2 ng/ul	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEL (2 ng/ul)	Reproductive/Teratogenic	High	2345940
117-81-7	4 Week(s), (5 Week(s))	*Lasius niger* (Black Garden Ant), Not reported, Female, Wild (COLLECTED DURING SWARMING FLIGHT FROM AN ORCHARD NEAR TOURS, AZAY SUR CHEY, FRANCE, IN JULY 2011)	No substrate, Topical, Topical, general, Not Reported	Unmeasured	0 ng/ul / 0 ng/ul / 2 ng/ul	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEL (2 ng/ul)	Reproductive/Teratogenic	High	2345940
117-81-7	5 Week(s), (5 Week(s))	*Lasius niger* (Black Garden Ant), Not reported, Female, Wild (COLLECTED DURING SWARMING FLIGHT FROM AN ORCHARD NEAR TOURS, AZAY SUR CHEY, FRANCE, IN JULY 2011)	No substrate, Topical, Topical, general, Not Reported	Unmeasured	0 ng/ul / 0 ng/ul / 2 ng/ul	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEL (2 ng/ul)	Reproductive/Teratogenic	High	2345940

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	0 Day(s), (5 Day(s))	*Lasius niger* (Black Garden Ant), Not reported, Not Reported, Wild (COLLECTED FROM A PERSONAL ORCHARD NEAR TOURS, A. LENOIR, AZAY SUR CHER, FRANCE)	No substrate, Environmental, Direct application, Not Reported	Unmeasured	0 ng/ul / 2000 ng/ul	Accumulation (Accumulation-Residue, Response Site: Cuticle)	LOEL (2000 ng/ul)	ADME (biotransformation)	Medium	2347468
117-81-7	1 Day(s), (5 Day(s))	*Lasius niger* (Black Garden Ant), Not reported, Not Reported, Wild (COLLECTED FROM A PERSONAL ORCHARD NEAR TOURS, A. LENOIR, AZAY SUR CHER, FRANCE)	No substrate, Environmental, Direct application, Not Reported	Unmeasured	0 ng/ul / 2000 ng/ul	Accumulation (Accumulation-Residue, Response Site: Cuticle)	LOEL (2000 ng/ul)	ADME (biotransformation)	Medium	2347468
117-81-7	2 Day(s), (5 Day(s))	*Lasius niger* (Black Garden Ant), Not reported, Not Reported, Wild (COLLECTED FROM A PERSONAL ORCHARD NEAR TOURS, A. LENOIR, AZAY SUR CHER, FRANCE)	No substrate, Environmental, Direct application, Not Reported	Unmeasured	0 ng/ul / 2000 ng/ul	Accumulation (Accumulation-Residue, Response Site: Cuticle)	NR (2000 ng/ul)	ADME (biotransformation)	Medium	2347468

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Day(s), (5 Day(s))	*Lasius niger* (Black Garden Ant), Not reported, Not Reported, Wild (COLLECTED FROM A PERSONAL ORCHARD NEAR TOURS, A. LENOIR, AZAY SUR CHER, FRANCE)	No substrate, Environmental, Direct application, Not Reported	Unmeasured	0 ng/ul / 2000 ng/ul	Accumulation (Accumulation-Residue, Response Site: Cuticle)	LOEL (2000 ng/ul)	ADME (biotransformation)	Medium	2347468
117-81-7	4 Day(s), (5 Day(s))	*Lasius niger* (Black Garden Ant), Not reported, Not Reported, Wild (COLLECTED FROM A PERSONAL ORCHARD NEAR TOURS, A. LENOIR, AZAY SUR CHER, FRANCE)	No substrate, Environmental, Direct application, Not Reported	Unmeasured	0 ng/ul / 2000 ng/ul	Accumulation (Accumulation-Residue, Response Site: Cuticle)	NR (2000 ng/ul)	ADME (biotransformation)	Medium	2347468
117-81-7	5 Day(s), (5 Day(s))	*Lasius niger* (Black Garden Ant), Not reported, Not Reported, Wild (COLLECTED FROM A PERSONAL ORCHARD NEAR TOURS, A. LENOIR, AZAY SUR CHER, FRANCE)	No substrate, Environmental, Direct application, Not Reported	Unmeasured	0 ng/ul / 2000 ng/ul	Accumulation (Accumulation-Residue, Response Site: Cuticle)	NOEL (2000 ng/ul)	ADME (biotransformation)	Medium	2347468

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	1 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (39.5 mg/g wet wt diet)	Behavioral	Medium	5494137
117-81-7	1 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	1 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (39.5 mg/g wet wt diet)	Behavioral	Medium	5494137
117-81-7	1 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	2 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	2 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (39.5 mg/g wet wt diet)	Behavioral	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	2 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	2 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (39.5 mg/g wet wt diet)	Behavioral	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	2.5 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEL (39.5 mg/g wet wt diet)	Mortality	Medium	5494137
117-81-7	2.5 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEL (4.3 mg/g wet wt diet)	Mortality	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	2.5 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEL (39.5 mg/g wet wt diet)	Mortality	Medium	5494137
117-81-7	2.5 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	NOEL (4.3 mg/g wet wt diet)	Development/Growth	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	2.5 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEL (4.3 mg/g wet wt diet)	Mortality	Medium	5494137
117-81-7	2.5 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	LOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	2.5 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	LOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	2.5 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	NOEL (4.3 mg/g wet wt diet)	Development/Growth	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	3 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (39.5 mg/g wet wt diet)	Behavioral	Medium	5494137
117-81-7	3 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (39.5 mg/g wet wt diet)	Behavioral	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	4 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	4 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	4 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (39.5 mg/g wet wt diet)	Behavioral	Medium	5494137
117-81-7	4 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (39.5 mg/g wet wt diet)	Behavioral	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	5 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	5 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	5 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	NOEL (4.3 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	5 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	LOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	5 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (39.5 mg/g wet wt diet)	Behavioral	Medium	5494137
117-81-7	5 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	NOEL (4.3 mg/g wet wt diet)	Development/Growth	Medium	5494137

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	5 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEL (4.3 mg/g wet wt diet)	Mortality	Medium	5494137
117-81-7	5 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	LOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	5 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEL (4.3 mg/g wet wt diet)	Mortality	Medium	5494137
117-81-7	5 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEL (0.4472 mg/g wet wt diet)	Mortality	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	5 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEL (0.4472 mg/g wet wt diet)	Mortality	Medium	5494137
117-81-7	5 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (39.5 mg/g wet wt diet)	Behavioral	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	6 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (4.3 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	6 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	6 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (39.5 mg/g wet wt diet)	Behavioral	Medium	5494137
117-81-7	6 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (39.5 mg/g wet wt diet)	Behavioral	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	6 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	6 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (4.3 mg/g wet wt diet)	Development/Growth	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured values (some measured values reported in article)	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NR (0.0011-39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	7 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEL (39.5 mg/g wet wt diet)	Behavioral	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEL (39.5 mg/g wet wt diet)	Behavioral	Medium	5494137
117-81-7	7 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (4.3 mg/g wet wt diet)	Behavioral	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured values (some measured values reported in article)	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NR (0.0011-39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	7 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (4.3 mg/g wet wt diet)	Behavioral	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	8 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (4.3 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	8 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (4.3 mg/g wet wt diet)	Behavioral	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	8 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEL (0.4472 mg/g wet wt diet)	Mortality	Medium	5494137
117-81-7	8 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	8 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	LOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	8 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	NOEL (4.3 mg/g wet wt diet)	Development/Growth	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
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117-81-7	8 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (4.3 mg/g wet wt diet)	Behavioral	Medium	5494137

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
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117-81-7	8 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEL (39.5 mg/g wet wt diet)	Behavioral	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	8 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEL (4.3 mg/g wet wt diet)	Mortality	Medium	5494137
117-81-7	8 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEL (39.5 mg/g wet wt diet)	Behavioral	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	8 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	8 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEL (4.3 mg/g wet wt diet)	Mortality	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	8 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEL (0.4472 mg/g wet wt diet)	Mortality	Medium	5494137
117-81-7	8 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	LOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	9 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (4.3 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	9 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (4.3 mg/g wet wt diet)	Behavioral	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	9 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	9 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEL (39.5 mg/g wet wt diet)	Behavioral	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	9 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	9 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (4.3 mg/g wet wt diet)	Development/Growth	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	9 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (4.3 mg/g wet wt diet)	Behavioral	Medium	5494137
117-81-7	9 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEL (39.5 mg/g wet wt diet)	Behavioral	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (4.3 mg/g wet wt diet)	Behavioral	Medium	5494137
117-81-7	10 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEL (39.5 mg/g wet wt diet)	Behavioral	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
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117-81-7	10 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (4.3 mg/g wet wt diet)	Behavioral	Medium	5494137

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	10 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (4.3 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	10 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEL (39.5 mg/g wet wt diet)	Behavioral	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	11 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEL (39.5 mg/g wet wt diet)	Behavioral	Medium	5494137
117-81-7	11 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	11 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (4.3 mg/g wet wt diet)	Behavioral	Medium	5494137
117-81-7	11 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (4.3 mg/g wet wt diet)	Development/Growth	Medium	5494137

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	11 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137
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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	11 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (4.3 mg/g wet wt diet)	Behavioral	Medium	5494137
117-81-7	11 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEL (39.5 mg/g wet wt diet)	Behavioral	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	12 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	12 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (4.3 mg/g wet wt diet)	Development/Growth	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	12 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEL (0.0011 mg/g wet wt diet)	Behavioral	Medium	5494137
117-81-7	12 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (4.3 mg/g wet wt diet)	Development/Growth	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	12 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEL (0.0011 mg/g wet wt diet)	Behavioral	Medium	5494137
117-81-7	12 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	13 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (4.3 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	13 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEL (0.0011 mg/g wet wt diet)	Behavioral	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	13 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	13 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEL (0.0011 mg/g wet wt diet)	Behavioral	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	13 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (4.3 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	13 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEL (0.0011 mg/g wet wt diet)	Behavioral	Medium	5494137
117-81-7	14 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEL (0.0011 mg/g wet wt diet)	Behavioral	Medium	5494137

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	14 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	15 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	NOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	15 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	15 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	NOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	15 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	15 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-LETH (39.5 mg/g wet wt diet)	Mortality	Medium	5494137
117-81-7	15 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEL (0.4472 mg/g wet wt diet)	Mortality	Medium	5494137

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	15 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEL (0.4472 mg/g wet wt diet)	Mortality	Medium	5494137
117-81-7	15 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEL (4.3 mg/g wet wt diet)	Mortality	Medium	5494137

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	15 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEL (0.0011 mg/g wet wt diet)	Behavioral	MISSING	5494137
117-81-7	15 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEL (4.3 mg/g wet wt diet)	Mortality	Medium	5494137

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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	13-15 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Cellular (Genetics-E75 nuclear receptor mRNA,Ecdysone receptor mRNA,Ultraspiracle mRNA, Response Site: Not reported)	NR (1.1-4.3 mg/g wet wt diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5494137
117-81-7	15 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-LETH (39.5 mg/g wet wt diet)	Mortality	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	13-15 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Cellular (Genetics-E75 nuclear receptor mRNA,Ecdysone receptor mRNA,Ultraspiracle mRNA, Response Site: Not reported)	NR (1.1-4.3 mg/g wet wt diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5494137
117-81-7	13-15 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Biochemical (Hormone(s)-Ecdysteroids, Response Site: Hemolymph)	NR (1.1-4.3 mg/g wet wt diet)	Mechanistic: Endocrine toxicity	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	13-15 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Biochemical (Biochemistry-Alanine,Arabitol,Aspartic Acid,Asparagine,Citric acid,Fructose,Fumarate,gamma-Aminobutyric acid,Galacticol,Galactose,Gluconic lactone acid,Glycine,Glucose,Galacturonic acid,Glutamic acid,Glyceric acid,Glycerol content,Isoleucine,Inositol 1-phosphate,Lactic acid,Leucine,Lysine,Malic acid,Mannose,meso-Erythritol,Pipecolic acid,Phenylalanine,Proline,Phosphoric acid,Putrescine,Quinic acid,Ribose,Ribitol,Succinic acid ,Serine,Spermidine,Sorbitol,Trehalose,Threonine,Valine,Xylose, Response Site: Not reported)	NR (0.0011-4.3 mg/g wet wt diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5494137
117-81-7	15 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEL (0.0011 mg/g wet wt diet)	Behavioral	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	13-15 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Biochemical (Hormone(s)-Ecdysteroids, Response Site: Hemolymph)	NR (1.1-4.3 mg/g wet wt diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5494137
117-81-7	13-15 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Larvae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Biochemical (Biochemistry-Alanine,Arabitol,Aspartic Acid,Asparagine,Citric acid,Fructose,Fumarate,gamma-Aminobutyric acid,Galacticol,Galactose,Gluconic lactone acid,Glycine,Glucose,Galacturonic acid,Glutamic acid,Glyceric acid,Glycerol content,Isoleucine,Inositol 1-phosphate,Lactic acid,Leucine,Lysine,Malic acid,Mannose,meso-Erythritol,Pipecolic acid,Phenylalanine,Proline,Phosphoric acid,Putrescine,Quinic acid,Ribose,Ribitol,Succinic acid ,Serine,Spermidine,Sorbitol,Trehalose,Threonine,Valine,Xylose, Response Site: Not reported)	NR (0.0011-4.3 mg/g wet wt diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	30 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar (Measured in: Pupae), Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Pupae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEL (4.3 mg/g wet wt diet)	Mortality	Medium	5494137
117-81-7	30 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar (Measured in: Pupae), Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Pupae	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEL (4.3 mg/g wet wt diet)	Mortality	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	5-30 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Accumulation (Accumulation-Residue, Response Site: Not reported)	NR (1.1-4.3 mg/g wet wt diet)	ADME (biotransformation)	Medium	5494137
117-81-7	30 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar (Measured in: Pupae), Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Pupae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEL (0.4472 mg/g wet wt diet)	Mortality	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	30 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar (Measured in: Pupae), Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Pupae	Unmeasured values (some measured values reported in article)	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	NR (0.0011-39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	30 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar (Measured in: Immature), Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Immature	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	NOEL (0.0011 mg/g wet wt diet)	Development/Growth	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	30 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar (Measured in: Pupae), Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Pupae	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEL (0.4472 mg/g wet wt diet)	Mortality	Medium	5494137
117-81-7	30 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar (Measured in: Immature), Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Immature	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	LOEL (0.0032 mg/g wet wt diet)	Development/Growth	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	30 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar (Measured in: Immature), Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Immature	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	NOEL (0.0011 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	30 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar (Measured in: Pupae), Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Pupae	Unmeasured values (some measured values reported in article)	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	NR (0.0011-39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	5-30 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Measured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Accumulation (Accumulation-Residue, Response Site: Not reported)	NR (1.1-4.3 mg/g wet wt diet)	ADME (biotransformation)	Medium	5494137
117-81-7	30 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar (Measured in: Pupae), Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Pupae	Unmeasured values (some measured values reported in article)	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Population (Population-Sex ratio, Response Site: Not reported)	NR (0.0011-39.5 mg/g wet wt diet)	Reproductive/Teratogenic	Medium	5494137

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Terrestrial: Arthropods Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	30 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar (Measured in: Pupae), Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Pupae	Unmeasured values (some measured values reported in article)	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Population (Population-Sex ratio, Response Site: Not reported)	NR (0.0011-39.5 mg/g wet wt diet)	Development/Growth	Medium	5494137
117-81-7	30 Day(s), (30 Day(s))	*Spodoptera littoralis* (Egyptian Cotton Leafworm), Larva, 3 Instar (Measured in: Immature), Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, NA Immature	Unmeasured	0.000392 mg/g wet wt diet / 0.00001 mg/g wet wt diet / 0.000443 mg/g wet wt diet / 0.000676 mg/g wet wt diet / 0.0011 mg/g wet wt diet / 0.0032 mg/g wet wt diet / 0.0197 mg/g wet wt diet / 0.4472 mg/g wet wt diet / 4.3 mg/g wet wt diet / 39.5 mg/g wet wt diet	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	LOEL (0.0032 mg/g wet wt diet)	Development/Growth	Medium	5494137

* If multiple extractions contained all identical information except the effect level, extraction rows were collapsed and the differing levels are listed by comma in this row.

Terrestrial: Avian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA Until hatch, (NA Until hatch)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, 9 Organism	Unmeasured	0 mg/kg egg / 5 mg/kg egg / 20 mg/kg egg / 50 mg/kg egg / 100 mg/kg egg	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	NOEL (100 mg/kg egg)	Development/Growth	High	1249807
117-81-7	NA Egg to juvenile, (NA Egg to juvenile)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, 11 Organism	Unmeasured	0 mg/kg egg / 100 mg/kg egg	Biochemical (Biochemistry-Cholesterol, Response Site: Serum)	NOEL (100 mg/kg egg)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	1249807
117-81-7	NA Egg to juvenile, (NA Egg to juvenile)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, 11 Organism	Unmeasured	0 mg/kg egg / 100 mg/kg egg	Behavior (Behavior-Distance moved, change in direct movement, Response Site: Not reported)	NOEL (100 mg/kg egg)	Behavioral	High	1249807
117-81-7	NA Egg to juvenile, (NA Egg to juvenile)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, 10 Organism	Unmeasured	0 mg/kg egg / 100 mg/kg egg	Behavior (Behavior-Distance moved, change in direct movement, Response Site: Not reported)	NOEL (100 mg/kg egg)	Behavioral	High	1249807
117-81-7	NA Egg to juvenile, (NA Egg to juvenile)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, 8 Organism	Unmeasured	0 mg/kg egg / 100 mg/kg egg	Biochemical (Enzyme(s)-Alkaline phosphatase, Response Site: Serum)	LOEL (100 mg/kg egg)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	1249807
117-81-7	NA Egg to juvenile, (NA Egg to juvenile)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, 11 Organism	Unmeasured	0 mg/kg egg / 100 mg/kg egg	Biochemical (Enzyme(s)-Alanine transaminase (ALT), Response Site: Serum)	LOEL (100 mg/kg egg)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	1249807

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Terrestrial: Avian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA Egg to juvenile, (NA Egg to juvenile)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, 12 Organism	Unmeasured	0 mg/kg egg / 100 mg/kg egg	Biochemical (Biochemistry-Urea, Response Site: Serum)	LOEL (100 mg/kg egg)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	1249807
117-81-7	NA Egg to juvenile, (NA Egg to juvenile)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, 10 Organism	Unmeasured	0 mg/kg egg / 100 mg/kg egg	Biochemical (Biochemistry-Creatinine, Response Site: Serum)	LOEL (100 mg/kg egg)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	1249807
117-81-7	NA Egg to juvenile, (NA Egg to juvenile)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, 6 Organism	Unmeasured	0 mg/kg egg / 100 mg/kg egg	Biochemical (Biochemistry-8-hydroxydeoxyguanosine, Response Site: Serum)	LOEL (100 mg/kg egg)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	1249807
117-81-7	NA Egg to juvenile, (NA Egg to juvenile)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, Not Reported	Unmeasured	0 mg/kg egg / 100 mg/kg egg	Behavior (Behavior-Accuracy of learned task, performance, Response Site: Not reported)	LOEL (100 mg/kg egg)	Behavioral	High	1249807
117-81-7	NA Egg to juvenile, (NA Egg to juvenile)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, 10 Organism	Unmeasured	0 mg/kg egg / 100 mg/kg egg	Biochemical (Biochemistry-Low density lipoprotein, Response Site: Serum)	NOEL (100 mg/kg egg)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	1249807
117-81-7	NA Egg to juvenile, (NA Egg to juvenile)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, 11 Organism	Unmeasured	0 mg/kg egg / 100 mg/kg egg	Biochemical (Biochemistry-Protein content, Response Site: Serum)	NOEL (100 mg/kg egg)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	1249807
117-81-7	NA Egg to juvenile, (NA Egg to juvenile)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, 12 Organism	Unmeasured	0 mg/kg egg / 100 mg/kg egg	Biochemical (Biochemistry-Triglycerides, Response Site: Serum)	NOEL (100 mg/kg egg)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	1249807

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Terrestrial: Avian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA Egg to juvenile, (NA Egg to juvenile)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, 12 Organism	Unmeasured	0 mg/kg egg / 100 mg/kg egg	Biochemical (Biochemistry-Uric acid, Response Site: Serum)	NOEL (100 mg/kg egg)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	1249807
117-81-7	NA Egg to juvenile, (NA Egg to juvenile)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, 12 Organism	Unmeasured	0 mg/kg egg / 100 mg/kg egg	Biochemical (Enzyme(s)-Aspartate aminotransferase, Response Site: Serum)	NOEL (100 mg/kg egg)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	1249807
117-81-7	NA Until hatch, (NA Until hatch)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, 9-19 Organism	Unmeasured	0 mg/kg egg / 5 mg/kg egg / 20 mg/kg egg / 50 mg/kg egg / 100 mg/kg egg	Growth (Development-Deformation, Response Site: Not reported)	NR (5-100 mg/kg egg)	Development/Growth	High	1249807
117-81-7	NA Until hatch, (NA Until hatch)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, 9 Organism	Unmeasured	0 mg/kg egg / 5 mg/kg egg / 20 mg/kg egg / 50 mg/kg egg / 100 mg/kg egg	Mortality (Mortality-Hatch, Response Site: Not reported)	NOEL (100 mg/kg egg)	Mortality	High	1249807
117-81-7	NA Egg to juvenile, (NA Egg to juvenile)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, 10 Organism	Unmeasured	0 mg/kg egg / 100 mg/kg egg	Biochemical (Biochemistry-Glucose, Response Site: Serum)	NOEL (100 mg/kg egg)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	1249807
117-81-7	NA Egg to juvenile, (NA Egg to juvenile)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, 12 Organism	Unmeasured	0 mg/kg egg / 100 mg/kg egg	Biochemical (Biochemistry-High density lipoprotein cholesterol, Response Site: Serum)	NOEL (100 mg/kg egg)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	1249807
117-81-7	7 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEL (1 % diet)	Behavioral	Medium	683058

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Terrestrial: Avian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Biochemical (Biochemistry-Cholesterol, Response Site: Plasma)	LOEL (1 % diet)	Mechanistic: Biomarkers (exposure and effect)	Medium	683058
117-81-7	7 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (1 % diet)	Development/Growth	High	683058
117-81-7	7 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Biochemical (Biochemistry-Lipid, Response Site: Plasma)	NOEL (1 % diet)	Mechanistic: Biomarkers (exposure and effect)	Medium	683058
117-81-7	7 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEL (1 % diet)	Reproductive/Teratogenic	Medium	683058
117-81-7	14 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	LOEL (1 % diet)	Behavioral	Medium	683058
117-81-7	14 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Biochemical (Biochemistry-Cholesterol, Response Site: Plasma)	LOEL (1 % diet)	Mechanistic: Biomarkers (exposure and effect)	Medium	683058
117-81-7	14 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEL (1 % diet)	Reproductive/Teratogenic	Medium	683058

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Terrestrial: Avian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (1 % diet)	Development/Growth	High	683058
117-81-7	14 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Biochemical (Biochemistry-Lipid, Response Site: Plasma)	NOEL (1 % diet)	Mechanistic: Biomarkers (exposure and effect)	Medium	683058
117-81-7	21 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Biochemical (Biochemistry-Cholesterol, Response Site: Plasma)	LOEL (1 % diet)	Mechanistic: Biomarkers (exposure and effect)	Medium	683058
117-81-7	21 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Biochemical (Biochemistry-Lipid, Response Site: Plasma)	NOEL (1 % diet)	Mechanistic: Biomarkers (exposure and effect)	Medium	683058
117-81-7	21 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (1 % diet)	Development/Growth	High	683058
117-81-7	21 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (1 % diet)	Behavioral	Medium	683058
117-81-7	21 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	LOEL (1 % diet)	Reproductive/Teratogenic	Medium	683058

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Terrestrial: Avian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	28 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gav-age), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Biochemical (Biochemistry-Lipid, Response Site: Plasma)	NOEL (1 % diet)	Mechanistic: Biomarkers (exposure and effect)	Medium	683058
117-81-7	28 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gav-age), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Growth (Morphology-Weight, Response Site: Liver)	NOEL (1 % diet)	Develop-ment/Growth	High	683058
117-81-7	28 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gav-age), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Liver)	NOEL (1 % diet)	Develop-ment/Growth	High	683058
117-81-7	28 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gav-age), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (1 % diet)	Develop-ment/Growth	High	683058
117-81-7	28 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gav-age), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Biochemical (Biochemistry-Lipid, Response Site: Liver)	NOEL (1 % diet)	Mechanistic: Biomarkers (exposure and effect)	Medium	683058
117-81-7	28 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gav-age), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NOEL (1 % diet)	Behavioral	Medium	683058
117-81-7	28 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gav-age), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	LOEL (1 % diet)	Reproduc-tive/Teratogenic	Medium	683058

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Terrestrial: Avian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	28 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Biochemical (Biochemistry-Lipid, Response Site: Muscle)	LOEL (1 % diet)	Mechanistic: Biomarkers (exposure and effect)	Medium	683058
117-81-7	28 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Biochemical (Biochemistry-Cholesteryl ester, Response Site: Liver)	LOEL (1 % diet)	Mechanistic: Biomarkers (exposure and effect)	Medium	683058
117-81-7	28 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Biochemical (Biochemistry-Cholesterol, Response Site: Plasma)	LOEL (1 % diet)	Mechanistic: Biomarkers (exposure and effect)	Medium	683058
117-81-7	28 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Biochemical (Biochemistry-Cholesterol, Response Site: Muscle)	LOEL (1 % diet)	Mechanistic: Biomarkers (exposure and effect)	Medium	683058
117-81-7	28 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Biochemical (Biochemistry-Cholesterol, Response Site: Liver)	LOEL (1 % diet)	Mechanistic: Biomarkers (exposure and effect)	Medium	683058
117-81-7	28 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Biochemical (Biochemistry-Cholesterol, Response Site: Muscle)	NOEL (1 % diet)	Mechanistic: Biomarkers (exposure and effect)	Medium	683058
117-81-7	28 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Biochemical (Biochemistry-Water content, Response Site: Liver)	NOEL (1 % diet)	Mechanistic: Biomarkers (exposure and effect)	Medium	683058

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Terrestrial: Avian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	35 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (1 % diet)	Development/Growth	High	683058
117-81-7	35 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 % diet / 1 % diet	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEL (1 % diet)	Reproductive/Teratogenic	Medium	683058
117-81-7	35 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s) (Measured in: Egg), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, NA Egg	Unmeasured	0 % diet / 1 % diet	Biochemical (Biochemistry-Albumin,Cholesterol,Lipid, Response Site: Not reported)	NR (1 % diet)	Mechanistic: Biomarkers (exposure and effect)	Medium	683058
117-81-7	35 Day(s), (35 Day(s))	*Gallus gallus* (Chicken), Pullet, >20 Week(s) (Measured in: Egg), Female, Laboratory (COMMERCIAL HATCHERY)	No substrate, Oral (diet, drink, gavage), Food, NA Egg	Unmeasured	0 % diet / 1 % diet	Reproduction (Reproduction-Percent shell,Weight,Yolk, percent, Response Site: Not reported)	NR (1 % diet)	Reproductive/Teratogenic	Medium	683058
117-81-7	NA Not applicable, (Not Reported)	*Streptopelia risoria* (Ringed Turtle-Dove), Adult, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 ppm diet / 10 ppm diet	Physiology (Physiology-Water loss, Response Site: Egg)	NOEL (10 ppm diet)	Development/Growth	Uninformative	681729
117-81-7	NA Not applicable, (Not Reported)	*Streptopelia risoria* (Ringed Turtle-Dove), Adult, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 ppm diet / 10 ppm diet	Physiology (Physiology-Permeability, tissue, membrane, Response Site: Egg)	NOEL (10 ppm diet)	Development/Growth	Uninformative	681729

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Terrestrial: Avian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA Not applicable, (Not Reported)	*Streptopelia risoria* (Ringed Turtle-Dove), Adult, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 ppm diet / 10 ppm diet	Reproduction (Reproduction-Weight, Response Site: Egg)	NOEL (10 ppm diet)	Development/Growth	Uninformative	681729
117-81-7	NA Not applicable, (Not Reported)	*Streptopelia risoria* (Ringed Turtle-Dove), Adult, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 ppm diet / 10 ppm diet	Reproduction (Reproduction-Thickness, Response Site: Egg)	NOEL (10 ppm diet)	Development/Growth	Uninformative	681729
117-81-7	NA Not applicable, (Not Reported)	*Streptopelia risoria* (Ringed Turtle-Dove), Adult, Not Reported, Not reported	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 ppm diet / 10 ppm diet	Reproduction (Reproduction-Size, Response Site: Egg)	NOEL (10 ppm diet)	Development/Growth	Uninformative	681729

* If multiple extractions contained all identical information except the effect level, extraction rows were collapsed and the differing levels are listed by comma in this row.

Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	13 Day(s), (27 Day(s))	*Bos taurus* (Domesticated Cattle), Not reported, Female, Laboratory (FROM EXPERIMENTAL DAIRY FARM, BET-DAGAN, ISRAEL)	No substrate, Oral (diet, drink, gavage), Gavage, 4 Organism	Unmeasured	0 mg/kg bdwt/d / 100 mg/kg bdwt/d	Growth (Morphology-Volume, Response Site: Ovaries)	NOEL (100 mg/kg bdwt/d)	Development/Growth	High	3071101
117-81-7	15 Day(s), (27 Day(s))	*Bos taurus* (Domesticated Cattle), Not reported, Female, Laboratory (FROM EXPERIMENTAL DAIRY FARM, BET-DAGAN, ISRAEL)	No substrate, Oral (diet, drink, gavage), Gavage, 4 Organism	Unmeasured	0 mg/kg bdwt/d / 100 mg/kg bdwt/d	Growth (Morphology-Volume, Response Site: Ovaries)	LOEL (100 mg/kg bdwt/d)	Development/Growth	High	3071101
117-81-7	17 Day(s), (27 Day(s))	*Bos taurus* (Domesticated Cattle), Not reported, Female, Laboratory (FROM EXPERIMENTAL DAIRY FARM, BET-DAGAN, ISRAEL)	No substrate, Oral (diet, drink, gavage), Gavage, 4 Organism	Unmeasured	0 mg/kg bdwt/d / 100 mg/kg bdwt/d	Growth (Morphology-Volume, Response Site: Ovaries)	NOEL (100 mg/kg bdwt/d)	Development/Growth	High	3071101
117-81-7	19 Day(s), (27 Day(s))	*Bos taurus* (Domesticated Cattle), Not reported, Female, Laboratory (FROM EXPERIMENTAL DAIRY FARM, BET-DAGAN, ISRAEL)	No substrate, Oral (diet, drink, gavage), Gavage, 4 Organism	Unmeasured	0 mg/kg bdwt/d / 100 mg/kg bdwt/d	Cellular (Cell(s)-Size, Response Site: Ovarian follicle)	LOEL (100 mg/kg bdwt/d)	Mechanistic: Endocrine toxicity; Reproductive/Teratogenic	High	3071101

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Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	19 Day(s), (27 Day(s))	*Bos taurus* (Domesticated Cattle), Not reported, Female, Laboratory (FROM EXPERIMENTAL DAIRY FARM, BET-DAGAN, ISRAEL)	No substrate, Oral (diet, drink, gavage), Gavage, 4 Organism	Unmeasured	0 mg/kg bdwt/d / 100 mg/kg bdwt/d	Growth (Morphology-Volume, Response Site: Ovaries)	NOEL (100 mg/kg bdwt/d)	Development/Growth	High	3071101
117-81-7	22 Day(s), (27 Day(s))	*Bos taurus* (Domesticated Cattle), Not reported, Female, Laboratory (FROM EXPERIMENTAL DAIRY FARM, BET-DAGAN, ISRAEL)	No substrate, Oral (diet, drink, gavage), Gavage, 4 Organism	Unmeasured	0 mg/kg bdwt/d / 100 mg/kg bdwt/d	Growth (Morphology-Volume, Response Site: Ovaries)	NOEL (100 mg/kg bdwt/d)	Development/Growth	High	3071101
117-81-7	13-24 Day(s), (27 Day(s))	*Bos taurus* (Domesticated Cattle), Not reported, Female, Laboratory (FROM EXPERIMENTAL DAIRY FARM, BET-DAGAN, ISRAEL)	No substrate, Oral (diet, drink, gavage), Gavage, 4 Organism	Unmeasured	0 mg/kg bdwt/d / 100 mg/kg bdwt/d	Growth (Morphology-Volume, Response Site: Ovaries)	LOEL (100 mg/kg bdwt/d)	Development/Growth	High	3071101
117-81-7	24 Day(s), (27 Day(s))	*Bos taurus* (Domesticated Cattle), Not reported, Female, Laboratory (FROM EXPERIMENTAL DAIRY FARM, BET-DAGAN, ISRAEL)	No substrate, Oral (diet, drink, gavage), Gavage, 4 Organism	Unmeasured	0 mg/kg bdwt/d / 100 mg/kg bdwt/d	Growth (Morphology-Volume, Response Site: Ovaries)	LOEL (100 mg/kg bdwt/d)	Development/Growth	High	3071101

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Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	9-24 Day(s), (27 Day(s))	*Bos taurus* (Domesticated Cattle), Not reported, Female, Laboratory (FROM EXPERIMENTAL DAIRY FARM, BET-DAGAN, ISRAEL)	No substrate, Oral (diet, drink, gavage), Gavage, 4 Organism	Unmeasured	0 mg/kg bdwt/d / 100 mg/kg bdwt/d	Reproduction (Reproduction-Germ cell count, Response Site: Ovaries)	NR (100 mg/kg bdwt/d)	Reproductive/Teratogenic	High	3071101
117-81-7	24 Day(s), (27 Day(s))	*Bos taurus* (Domesticated Cattle), Not reported, Female, Laboratory (FROM EXPERIMENTAL DAIRY FARM, BET-DAGAN, ISRAEL)	No substrate, Oral (diet, drink, gavage), Gavage, 4 Organism	Unmeasured	0 mg/kg bdwt/d / 100 mg/kg bdwt/d	Reproduction (Reproduction-Germ cell count, Response Site: Ovaries)	NOEL (100 mg/kg bdwt/d)	Reproductive/Teratogenic	High	3071101
117-81-7	9-27 Day(s), (27 Day(s))	*Bos taurus* (Domesticated Cattle), Not reported, Female, Laboratory (FROM EXPERIMENTAL DAIRY FARM, BET-DAGAN, ISRAEL)	No substrate, Oral (diet, drink, gavage), Gavage, 4 Organism	Unmeasured	0 mg/kg bdwt/d / 100 mg/kg bdwt/d	Cellular (Cell(s)-Size, Response Site: Ovarian follicle)	NR (100 mg/kg bdwt/d)	Mechanistic: Endocrine toxicity; Reproductive/Teratogenic	High	3071101
117-81-7	27 Day(s), (27 Day(s))	*Bos taurus* (Domesticated Cattle), Not reported, Female, Laboratory (FROM EXPERIMENTAL DAIRY FARM, BET-DAGAN, ISRAEL)	No substrate, Oral (diet, drink, gavage), Gavage, 4 Organism	Unmeasured	0 mg/kg bdwt/d / 100 mg/kg bdwt/d	Cellular (Cell(s)-Size, Response Site: Ovarian follicle)	LOEL (100 mg/kg bdwt/d)	Mechanistic: Endocrine toxicity; Reproductive/Teratogenic	High	3071101

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Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	9-27 Day(s), (27 Day(s))	*Bos taurus* (Domesticated Cattle), Not reported, Female, Laboratory (FROM EXPERIMENTAL DAIRY FARM, BET-DAGAN, ISRAEL)	No substrate, Oral (diet, drink, gavage), Gavage, 4 Organism	Unmeasured	0 mg/kg bdwt/d / 100 mg/kg bdwt/d	Biochemical (Hormone(s)-Progesterone, Response Site: Plasma)	NR (100 mg/kg bdwt/d)	Mechanistic: Endocrine toxicity; Reproductive/Teratogenic	High	3071101
117-81-7	27 Day(s), (27 Day(s))	*Bos taurus* (Domesticated Cattle), Not reported, Female, Laboratory (FROM EXPERIMENTAL DAIRY FARM, BET-DAGAN, ISRAEL)	No substrate, Oral (diet, drink, gavage), Gavage, 4 Organism	Unmeasured	0 mg/kg bdwt/d / 100 mg/kg bdwt/d	Growth (Morphology-Abnormal, Response Site: Ovarian follicle)	NOEL (100 mg/kg bdwt/d)	Development/Growth	High	3071101
117-81-7	14 Month(s), (14 Month(s))	*Mustela putorius* (European Polecat), Sexually mature, 18 Month(s), Male, Laboratory (WELLCOME VETERINARY RESEARCH STATION, FRANT, KENT)	No substrate, Oral (diet, drink, gavage), Food, 7 Organism	Unmeasured	0 mg/kg bdwt/d / 650-2000 mg/kg bdwt/d	Biochemical (Enzyme(s)-Cytochrome P-450, Response Site: Liver)	NOEL (650-2000 mg/kg bdwt/d)	Hepatic/Liver	Uninformative	746754
117-81-7	14 Month(s), (14 Month(s))	*Mustela putorius* (European Polecat), Sexually mature, 18 Month(s), Male, Laboratory (WELLCOME VETERINARY RESEARCH STATION, FRANT, KENT)	No substrate, Oral (diet, drink, gavage), Food, 7 Organism	Unmeasured	0 mg/kg bdwt/d / 650-2000 mg/kg bdwt/d	Biochemical (Enzyme(s)-Ethylmorphine-n-demethylase, Response Site: Liver)	LOEL (650-2000 mg/kg bdwt/d)	Hepatic/Liver	Uninformative	746754

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Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Month(s), (14 Month(s))	*Mustela putorius* (European Polecat), Sexually mature, 18 Month(s), Male, Laboratory (WELLCOME VETERINARY RESEARCH STATION, FRANT, KENT)	No substrate, Oral (diet, drink, gavage), Food, 7 Organism	Unmeasured	0 mg/kg bdwt/d / 650-2000 mg/kg bdwt/d	Biochemical (Enzyme(s)-Glucose-6-phosphatase, Response Site: Liver)	LOEL (650-2000 mg/kg bdwt/d)	Hepatic/Liver	Uninformative	746754
117-81-7	14 Month(s), (14 Month(s))	*Mustela putorius* (European Polecat), Sexually mature, 18 Month(s), Male, Laboratory (WELLCOME VETERINARY RESEARCH STATION, FRANT, KENT)	No substrate, Oral (diet, drink, gavage), Food, 7 Organism	Unmeasured	0 mg/kg bdwt/d / 650-2000 mg/kg bdwt/d	Biochemical (Enzyme(s)-4-OH biphenyl hydroxylase, Response Site: Liver)	LOEL (650-2000 mg/kg bdwt/d)	Hepatic/Liver	Uninformative	746754
117-81-7	14 Month(s), (14 Month(s))	*Mustela putorius* (European Polecat), Sexually mature, 18 Month(s), Male, Laboratory (WELLCOME VETERINARY RESEARCH STATION, FRANT, KENT)	No substrate, Oral (diet, drink, gavage), Food, 7 Organism	Unmeasured	0 mg/kg bdwt/d / 650-2000 mg/kg bdwt/d	Biochemical (Enzyme(s)-Alcohol dehydrogenase, Response Site: Liver)	LOEL (650-2000 mg/kg bdwt/d)	Hepatic/Liver	Uninformative	746754
117-81-7	14 Month(s), (14 Month(s))	*Mustela putorius* (European Polecat), Sexually mature, 18 Month(s), Male, Laboratory (WELLCOME VETERINARY RESEARCH STATION, FRANT, KENT)	No substrate, Oral (diet, drink, gavage), Food, 7 Organism	Unmeasured	0 mg/kg bdwt/d / 650-2000 mg/kg bdwt/d	Biochemical (Enzyme(s)-Aniline hydroxylase, Response Site: Liver)	LOEL (650-2000 mg/kg bdwt/d)	Hepatic/Liver	Uninformative	746754

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Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Month(s), (14 Month(s))	*Mustela putorius* (European Polecat), Sexually mature, 18 Month(s), Male, Laboratory (WELLCOME VETERINARY RESEARCH STATION, FRANT, KENT)	No substrate, Oral (diet, drink, gavage), Food, 7 Organism	Unmeasured	0 mg/kg bdwt/d / 650-2000 mg/kg bdwt/d	Biochemical (Enzyme(s)-Catalase, Response Site: Liver)	LOEL (650-2000 mg/kg bdwt/d)	Hepatic/Liver	Uninformative	746754
117-81-7	14 Month(s), (14 Month(s))	*Mustela putorius* (European Polecat), Sexually mature, 18 Month(s), Male, Laboratory (WELLCOME VETERINARY RESEARCH STATION, FRANT, KENT)	No substrate, Oral (diet, drink, gavage), Food, 7 Organism	Unmeasured	0 mg/kg bdwt/d / 650-2000 mg/kg bdwt/d	Biochemical (Enzyme(s)-Cytochrome B-5, Response Site: Liver)	LOEL (650-2000 mg/kg bdwt/d)	Hepatic/Liver	Uninformative	746754
117-81-7	14 Month(s), (14 Month(s))	*Mustela putorius* (European Polecat), Sexually mature, 18 Month(s), Male, Laboratory (WELLCOME VETERINARY RESEARCH STATION, FRANT, KENT)	No substrate, Oral (diet, drink, gavage), Food, 7 Organism	Unmeasured	0 mg/kg bdwt/d / 650-2000 mg/kg bdwt/d	Cellular (Genetics-DNA concentration, Response Site: Liver)	LOEL (650-2000 mg/kg bdwt/d)	Hepatic/Liver	Uninformative	746754
117-81-7	14 Month(s), (14 Month(s))	*Mustela putorius* (European Polecat), Sexually mature, 18 Month(s), Male, Laboratory (WELLCOME VETERINARY RESEARCH STATION, FRANT, KENT)	No substrate, Oral (diet, drink, gavage), Food, 7 Organism	Unmeasured	0 mg/kg bdwt/d / 650-2000 mg/kg bdwt/d	Biochemical (Enzyme(s)-Cytochrome C-oxidase, Response Site: Liver)	LOEL (650-2000 mg/kg bdwt/d)	Hepatic/Liver	Uninformative	746754

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Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Month(s), (14 Month(s))	*Mustela putorius* (European Polecat), Sexually mature, 18 Month(s), Male, Laboratory (WELLCOME VETERINARY RESEARCH STATION, FRANT, KENT)	No substrate, Oral (diet, drink, gavage), Food, 7 Organism	Unmeasured	0 mg/kg bdwt/d / 650-2000 mg/kg bdwt/d	Biochemical (Enzyme(s)-NADPH cytochrome C reductase, Response Site: Liver)	LOEL (650-2000 mg/kg bdwt/d)	Hepatic/Liver	Uninformative	746754
117-81-7	14 Month(s), (14 Month(s))	*Mustela putorius* (European Polecat), Sexually mature, 18 Month(s), Male, Laboratory (WELLCOME VETERINARY RESEARCH STATION, FRANT, KENT)	No substrate, Oral (diet, drink, gavage), Food, 7 Organism	Unmeasured	0 mg/kg bdwt/d / 650-2000 mg/kg bdwt/d	Biochemical (Enzyme(s)-Succinate dehydrogenase, Response Site: Liver)	LOEL (650-2000 mg/kg bdwt/d)	Hepatic/Liver	Uninformative	746754
117-81-7	14 Month(s), (14 Month(s))	*Mustela putorius* (European Polecat), Sexually mature, 18 Month(s), Male, Laboratory (WELLCOME VETERINARY RESEARCH STATION, FRANT, KENT)	No substrate, Oral (diet, drink, gavage), Food, 7 Organism	Unmeasured	0 mg/kg bdwt/d / 650-2000 mg/kg bdwt/d	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Liver)	LOEL (650-2000 mg/kg bdwt/d)	Hepatic/Liver	Uninformative	746754
117-81-7	14 Month(s), (14 Month(s))	*Mustela putorius* (European Polecat), Sexually mature, 18 Month(s), Male, Laboratory (WELLCOME VETERINARY RESEARCH STATION, FRANT, KENT)	No substrate, Oral (diet, drink, gavage), Food, 7 Organism	Unmeasured	0 mg/kg bdwt/d / 650-2000 mg/kg bdwt/d	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Testes)	LOEL (650-2000 mg/kg bdwt/d)	Reproductive/Teratogenic	Uninformative	746754

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Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Month(s), (14 Month(s))	*Mustela putorius* (European Polecat), Sexually mature, 18 Month(s), Male, Laboratory (WELLCOME VETERINARY RESEARCH STATION, FRANT, KENT)	No substrate, Oral (diet, drink, gavage), Food, 7 Organism	Unmeasured	0 mg/kg bdwt/d / 650-2000 mg/kg bdwt/d	Growth (Morphology-Weight, Response Site: Not reported)	LOEL (650-2000 mg/kg bdwt/d)	Development/Growth	Uninformative	746754
117-81-7	14 Month(s), (14 Month(s))	*Mustela putorius* (European Polecat), Sexually mature, 18 Month(s), Male, Laboratory (WELLCOME VETERINARY RESEARCH STATION, FRANT, KENT)	No substrate, Oral (diet, drink, gavage), Food, 7 Organism	Unmeasured	0 mg/kg bdwt/d / 650-2000 mg/kg bdwt/d	Biochemical (Biochemistry-Protein content, Response Site: Liver)	NOEL (650-2000 mg/kg bdwt/d)	Hepatic/Liver	Uninformative	746754
117-81-7	14 Month(s), (14 Month(s))	*Mustela putorius* (European Polecat), Sexually mature, 18 Month(s), Male, Laboratory (WELLCOME VETERINARY RESEARCH STATION, FRANT, KENT)	No substrate, Oral (diet, drink, gavage), Food, 7 Organism	Unmeasured	0 mg/kg bdwt/d / 650-2000 mg/kg bdwt/d	Biochemical (Biochemistry-Protein content, Response Site: Liver,Microsome)	NOEL (650-2000 mg/kg bdwt/d)	Hepatic/Liver	Uninformative	746754
117-81-7	14 Month(s), (14 Month(s))	*Mustela putorius* (European Polecat), Sexually mature, 18 Month(s), Male, Laboratory (WELLCOME VETERINARY RESEARCH STATION, FRANT, KENT)	No substrate, Oral (diet, drink, gavage), Food, 7 Organism	Unmeasured	0 mg/kg bdwt/d / 650-2000 mg/kg bdwt/d	Physiology (Physiology-Lipid peroxidation, Response Site: Liver)	NOEL (650-2000 mg/kg bdwt/d)	Hepatic/Liver	Uninformative	746754

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Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	14 Month(s), (14 Month(s))	*Mustela putorius* (European Polecat), Sexually mature, 18 Month(s), Male, Laboratory (WELLCOME VETERINARY RESEARCH STATION, FRANT, KENT)	No substrate, Oral (diet, drink, gavage), Food, 7 Organism	Unmeasured	0 mg/kg bdwt/d / 650-2000 mg/kg bdwt/d	Cellular (Cell(s)-Cell changes, Response Site: Adrenal gland,Brain,Esophagus,Heart,Kidney,Liver,Lung(s),Lysosome,Trachea,Testes,Thyroid)	NR (650-2000 mg/kg bdwt/d)	Mechanistic: Cytotoxicity; Cardiovascular; Endocrine toxicity; Gastrointestinal; Kidney/renal; Liver toxicology; Neurotoxicology; Reproductive/Teratogenic; Respiratory	Uninformative	746754
117-81-7	0 hours pre-estrus, (5 Days post egg laying)	*Ovis aries* (Domestic Sheep), Adult, 4-7 Year(s), Female, Laboratory (FROM THE EXPERIMENTAL FARM OF THE INIA, MADRID, SPAIN)	No substrate, Injection, Intramuscular, 8 Organism	Unmeasured	0 mg/kg bdwt / 50 mg/kg bdwt	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Plasma)	LOEL (50 mg/kg bdwt)	Mechanistic: Endocrine toxicity	Medium	2519005
117-81-7	2 Days post egg laying, (5 Days post egg laying)	*Ovis aries* (Domestic Sheep), Adult, 4-7 Year(s), Female, Laboratory (FROM THE EXPERIMENTAL FARM OF THE INIA, MADRID, SPAIN)	No substrate, Injection, Intramuscular, 8 Organism	Unmeasured	0 mg/kg bdwt / 50 mg/kg bdwt	Biochemical (Hormone(s)-Progesterone, Response Site: Plasma)	LOEL (50 mg/kg bdwt)	Mechanistic: Endocrine toxicity	Medium	2519005
117-81-7	3 Days post egg laying, (5 Days post egg laying)	*Ovis aries* (Domestic Sheep), Adult, 4-7 Year(s), Female, Laboratory (FROM THE EXPERIMENTAL FARM OF THE INIA, MADRID, SPAIN)	No substrate, Injection, Intramuscular, 8 Organism	Unmeasured	0 mg/kg bdwt / 50 mg/kg bdwt	Biochemical (Hormone(s)-Progesterone, Response Site: Plasma)	LOEL (50 mg/kg bdwt)	Mechanistic: Endocrine toxicity	Medium	2519005

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Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	4 Days post egg laying, (5 Days post egg laying)	*Ovis aries* (Domestic Sheep), Adult, 4-7 Year(s), Female, Laboratory (FROM THE EXPERIMENTAL FARM OF THE INIA, MADRID, SPAIN)	No substrate, Injection, Intramuscular, 8 Organism	Unmeasured	0 mg/kg bdwt / 50 mg/kg bdwt	Biochemical (Hormone(s)-Progesterone, Response Site: Plasma)	LOEL (50 mg/kg bdwt)	Mechanistic: Endocrine toxicity	Medium	2519005
117-81-7	48 hours pre-estrus, (5 Days post egg laying)	*Ovis aries* (Domestic Sheep), Adult, 4-7 Year(s), Female, Laboratory (FROM THE EXPERIMENTAL FARM OF THE INIA, MADRID, SPAIN)	No substrate, Injection, Intramuscular, 8 Organism	Unmeasured	0 mg/kg bdwt / 50 mg/kg bdwt	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Plasma)	LOEL (50 mg/kg bdwt)	Mechanistic: Endocrine toxicity	Medium	2519005
117-81-7	5 Days post egg laying, (5 Days post egg laying)	*Ovis aries* (Domestic Sheep), Adult, 4-7 Year(s), Female, Laboratory (FROM THE EXPERIMENTAL FARM OF THE INIA, MADRID, SPAIN)	No substrate, Injection, Intramuscular, 8 Organism	Unmeasured	0 mg/kg bdwt / 50 mg/kg bdwt	Biochemical (Hormone(s)-Luteinizing hormone, Response Site: Plasma)	LOEL (50 mg/kg bdwt)	Mechanistic: Endocrine toxicity	Medium	2519005
117-81-7	5 Days post egg laying, (5 Days post egg laying)	*Ovis aries* (Domestic Sheep), Adult, 4-7 Year(s), Female, Laboratory (FROM THE EXPERIMENTAL FARM OF THE INIA, MADRID, SPAIN)	No substrate, Injection, Intramuscular, 8 Organism	Unmeasured	0 mg/kg bdwt / 50 mg/kg bdwt	Biochemical (Hormone(s)-Progesterone, Response Site: Plasma)	LOEL (50 mg/kg bdwt)	Mechanistic: Endocrine toxicity	Medium	2519005

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Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	0 hours pre-estrus, (5 Days post egg laying)	*Ovis aries* (Domestic Sheep), Adult, 4-7 Year(s), Female, Laboratory (FROM THE EXPERIMENTAL FARM OF THE INIA, MADRID, SPAIN)	No substrate, Injection, Intramuscular, 8 Organism	Unmeasured	0 mg/kg bdwt / 50 mg/kg bdwt	Growth (Morphology-Size, Response Site: Ovarian follicle)	NOEL (50 mg/kg bdwt)	Reproductive/Teratogenic	Medium	2519005
117-81-7	48 hours pre-estrus, (5 Days post egg laying)	*Ovis aries* (Domestic Sheep), Adult, 4-7 Year(s), Female, Laboratory (FROM THE EXPERIMENTAL FARM OF THE INIA, MADRID, SPAIN)	No substrate, Injection, Intramuscular, 8 Organism	Unmeasured	0 mg/kg bdwt / 50 mg/kg bdwt	Reproduction (Reproduction-Germ cell count, Response Site: Ovaries)	NOEL (50 mg/kg bdwt)	Reproductive/Teratogenic	Medium	2519005
117-81-7	24 hours pre-estrus, (5 Days post egg laying)	*Ovis aries* (Domestic Sheep), Adult, 4-7 Year(s), Female, Laboratory (FROM THE EXPERIMENTAL FARM OF THE INIA, MADRID, SPAIN)	No substrate, Injection, Intramuscular, 8 Organism	Unmeasured	0 mg/kg bdwt / 50 mg/kg bdwt	Reproduction (Reproduction-Germ cell count, Response Site: Ovaries)	NOEL (50 mg/kg bdwt)	Reproductive/Teratogenic	Medium	2519005
117-81-7	5 Days post egg laying, (5 Days post egg laying)	*Ovis aries* (Domestic Sheep), Adult, 4-7 Year(s), Female, Laboratory (FROM THE EXPERIMENTAL FARM OF THE INIA, MADRID, SPAIN)	No substrate, Injection, Intramuscular, 8 Organism	Unmeasured	0 mg/kg bdwt / 50 mg/kg bdwt	Growth (Morphology-Area, Response Site: Ovaries)	NOEL (50 mg/kg bdwt)	Reproductive/Teratogenic	Medium	2519005

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Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	5 Days post egg laying, (5 Days post egg laying)	*Ovis aries* (Domestic Sheep), Adult, 4-7 Year(s), Female, Laboratory (FROM THE EXPERIMENTAL FARM OF THE INIA, MADRID, SPAIN)	No substrate, Injection, Intramuscular, 8 Organism	Unmeasured	0 mg/kg bdwt / 50 mg/kg bdwt	Reproduction (Reproduction-Ovulation rate, Response Site: Not reported)	NOEL (50 mg/kg bdwt)	Reproductive/Teratogenic	Medium	2519005
117-81-7	2-4 Days post egg laying, (5 Days post egg laying)	*Ovis aries* (Domestic Sheep), Adult, 4-7 Year(s), Female, Laboratory (FROM THE EXPERIMENTAL FARM OF THE INIA, MADRID, SPAIN)	No substrate, Injection, Intramuscular, 8 Organism	Unmeasured	0 mg/kg bdwt / 50 mg/kg bdwt	Growth (Morphology-Area, Response Site: Ovaries)	NR (50 mg/kg bdwt)	Reproductive/Teratogenic	Medium	2519005
117-81-7	24-48 hours pre-estrus, (5 Days post egg laying)	*Ovis aries* (Domestic Sheep), Adult, 4-7 Year(s), Female, Laboratory (FROM THE EXPERIMENTAL FARM OF THE INIA, MADRID, SPAIN)	No substrate, Injection, Intramuscular, 8 Organism	Unmeasured	0 mg/kg bdwt / 50 mg/kg bdwt	Growth (Morphology-Size, Response Site: Ovarian follicle)	NR (50 mg/kg bdwt)	Reproductive/Teratogenic	Medium	2519005
117-81-7	5 Days post egg laying, (5 Days post egg laying)	*Ovis aries* (Domestic Sheep), Adult, 4-7 Year(s), Female, Laboratory (FROM THE EXPERIMENTAL FARM OF THE INIA, MADRID, SPAIN)	No substrate, Injection, Intramuscular, 8 Organism	Unmeasured	0 mg/kg bdwt / 50 mg/kg bdwt	Cellular (Histology-Degeneration,Inflammation,Lesions,Necrosis, Response Site: Liver)	NR (50 mg/kg bdwt)	Hepatic/Liver	Medium	2519005

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Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	0 hours pre-estrus, (5 Days post egg laying)	*Ovis aries* (Domestic Sheep), Adult, 4-7 Year(s), Female, Laboratory (FROM THE EXPERIMENTAL FARM OF THE INIA, MADRID, SPAIN)	No substrate, Injection, Intramuscular, 8 Organism	Unmeasured	0 mg/kg bdwt / 50 mg/kg bdwt	Reproduction (Reproduction-Germ cell count, Response Site: Ovaries)	NOEL (50 mg/kg bdwt)	Reproductive/Teratogenic	Medium	2519005
117-81-7	24 hours pre-estrus, (5 Days post egg laying)	*Ovis aries* (Domestic Sheep), Adult, 4-7 Year(s), Female, Laboratory (FROM THE EXPERIMENTAL FARM OF THE INIA, MADRID, SPAIN)	No substrate, Injection, Intramuscular, 8 Organism	Unmeasured	0 mg/kg bdwt / 50 mg/kg bdwt	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Plasma)	LOEL (50 mg/kg bdwt)	Mechanistic: Endocrine toxicity	Medium	2519005
117-81-7	1 Week(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 20 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	High	683666
117-81-7	1 Week(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 20 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	High	683666
117-81-7	1 Week(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 20 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Luteinizing hormone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	High	683666

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Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	2 Week(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 20 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	High	683666
117-81-7	2 Week(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 20 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Luteinizing hormone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	High	683666
117-81-7	2 Week(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 20 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	High	683666
117-81-7	3 Week(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 20 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	High	683666
117-81-7	3 Week(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 20 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Luteinizing hormone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	High	683666

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Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Week(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 20 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	High	683666
117-81-7	4 Week(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 20 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	High	683666
117-81-7	4 Week(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 20 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	High	683666
117-81-7	4 Week(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 20 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Luteinizing hormone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	High	683666
117-81-7	~6047.25 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666

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Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	~6047.5 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Luteinizing hormone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666
117-81-7	~6047.75 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666
117-81-7	~6048.5 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Luteinizing hormone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666
117-81-7	~6048.75 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Luteinizing hormone, Response Site: Plasma)	LOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666
117-81-7	~6049 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Luteinizing hormone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666

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Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	~6049.5 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Luteinizing hormone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666
117-81-7	~6049.75 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666
117-81-7	~6050 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Luteinizing hormone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666
117-81-7	~6050.5 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Luteinizing hormone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666
117-81-7	~6050.75 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666

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Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	~6051 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Luteinizing hormone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666
117-81-7	~6051.5 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Luteinizing hormone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666
117-81-7	~6051.75 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666
117-81-7	~6052 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Luteinizing hormone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666
117-81-7	~6052.5 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Luteinizing hormone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666

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Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	~6052.75 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666
117-81-7	~6053 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Luteinizing hormone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666
117-81-7	~6053.5 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Luteinizing hormone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666
117-81-7	~6053.75 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666
117-81-7	~6055 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666

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Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	~6056 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666
117-81-7	~6057 Hour(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666
117-81-7	~9 Month(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666
117-81-7	~9 Month(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 7 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Biochemical (Hormone(s)-Luteinizing hormone, Response Site: Plasma)	NOEL (300 mg/kg bdwt)	Mechanistic: Biomarkers (exposure and effect)	Medium	683666
117-81-7	~6-~9 Month(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Reproduction (Reproduction-Mounting, copulation, intercourse, Response Site: Not reported)	NOEL (300 mg/kg bdwt)	Reproductive/Teratogenic	High	683666

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Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	~6-~9 Month(s), (~9 Month(s))	*Sus scrofa* (Pig), 3 Week(s), Male, Laboratory (FROM EXPERIMENTAL STATION AT LOVSTA, SWEDEN)	No substrate, Oral (diet, drink, gavage), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Reproduction (Reproduction-Time to mounting, Response Site: Not reported)	NOEL (300 mg/kg bdwt)	Reproductive/Teratogenic	High	683666
117-81-7	21-25 Week(s), (33 Week(s))	*Sus scrofa* (Pig), Weanling, 3 Week(s), Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Reproduction (Reproduction-Sperm cell counts, Response Site: Sperm)	NOEL (300 mg/kg bdwt)	Reproductive/Teratogenic	High	683808
117-81-7	21-25 Week(s), (33 Week(s))	*Sus scrofa* (Pig), Weanling, 3 Week(s), Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Reproduction (Reproduction-Motility, Response Site: Sperm)	NOEL (300 mg/kg bdwt)	Reproductive/Teratogenic	High	683808
117-81-7	21-25 Week(s), (33 Week(s))	*Sus scrofa* (Pig), Weanling, 3 Week(s), Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Growth (Development-Deformation, Response Site: Not reported)	NOEL (300 mg/kg bdwt)	Reproductive/Teratogenic	High	683808
117-81-7	21-25 Week(s), (33 Week(s))	*Sus scrofa* (Pig), Weanling, 3 Week(s), Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Physiology (Physiology-Fluid volume, Response Site: Semen)	NOEL (300 mg/kg bdwt)	Reproductive/Teratogenic	High	683808
117-81-7	21-25 Week(s), (33 Week(s))	*Sus scrofa* (Pig), Weanling, 3 Week(s), Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Growth (Development-Deformation, Response Site: Not reported)	LOEL (300 mg/kg bdwt)	Reproductive/Teratogenic	High	683808
117-81-7	25-29 Week(s), (33 Week(s))	*Sus scrofa* (Pig), Weanling, 3 Week(s), Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Growth (Development-Deformation, Response Site: Not reported)	LOEL (300 mg/kg bdwt)	Reproductive/Teratogenic	High	683808
117-81-7	25-29 Week(s), (33 Week(s))	*Sus scrofa* (Pig), Weanling, 3 Week(s), Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Reproduction (Reproduction-Sperm cell counts, Response Site: Sperm)	NOEL (300 mg/kg bdwt)	Reproductive/Teratogenic	High	683808

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Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	25-29 Week(s), (33 Week(s))	*Sus scrofa* (Pig), Weanling, 3 Week(s), Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Growth (Development-Deformation, Response Site: Not reported)	NOEL (300 mg/kg bdwt)	Reproduc-tive/Teratogenic	High	683808
117-81-7	25-29 Week(s), (33 Week(s))	*Sus scrofa* (Pig), Weanling, 3 Week(s), Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Reproduction (Reproduction-Motility, Re-sponse Site: Sperm)	NOEL (300 mg/kg bdwt)	Reproduc-tive/Teratogenic	High	683808
117-81-7	25-29 Week(s), (33 Week(s))	*Sus scrofa* (Pig), Weanling, 3 Week(s), Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Physiology (Physiology-Fluid volume, Response Site: Semen)	NOEL (300 mg/kg bdwt)	Reproduc-tive/Teratogenic	High	683808
117-81-7	31-33 Week(s), (33 Week(s))	*Sus scrofa* (Pig), Weanling, 3 Week(s), Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Reproduction (Reproduction-Mean amplitude of lateral head displacement, Response Site: Sperm)	NOEL (300 mg/kg bdwt)	Reproduc-tive/Teratogenic	High	683808
117-81-7	21-33 Week(s), (33 Week(s))	*Sus scrofa* (Pig), Weanling, 3 Week(s), Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Cellular (Cell(s)-Cell changes, Response Site: Semen)	NR (300 mg/kg bdwt)	Mechanistic: Cytotoxicity	High	683808
117-81-7	31-33 Week(s), (33 Week(s))	*Sus scrofa* (Pig), Weanling, 3 Week(s), Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Physiology (Physiology-Hyperactivity, Response Site: Sperm)	NOEL (300 mg/kg bdwt)	Reproduc-tive/Teratogenic	High	683808
117-81-7	29-33 Week(s), (33 Week(s))	*Sus scrofa* (Pig), Weanling, 3 Week(s), Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Physiology (Physiology-Fluid volume, Response Site: Semen)	NOEL (300 mg/kg bdwt)	Reproduc-tive/Teratogenic	High	683808
117-81-7	29-33 Week(s), (33 Week(s))	*Sus scrofa* (Pig), Weanling, 3 Week(s), Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Growth (Development-Deformation, Response Site: Not reported)	NOEL (300 mg/kg bdwt)	Reproduc-tive/Teratogenic	High	683808

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Terrestrial: Mammalian Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	29-33 Week(s), (33 Week(s))	*Sus scrofa* (Pig), Weanling, 3 Week(s), Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Reproduction (Reproduction-Motility, Response Site: Sperm)	NOEL (300 mg/kg bdwt)	Reproductive/Teratogenic	High	683808
117-81-7	29-33 Week(s), (33 Week(s))	*Sus scrofa* (Pig), Weanling, 3 Week(s), Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Reproduction (Reproduction-Sperm cell counts, Response Site: Sperm)	NOEL (300 mg/kg bdwt)	Reproductive/Teratogenic	High	683808
117-81-7	31-33 Week(s), (33 Week(s))	*Sus scrofa* (Pig), Weanling, 3 Week(s), Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Reproduction (Reproduction-Motility, Response Site: Sperm)	NOEL (300 mg/kg bdwt)	Reproductive/Teratogenic	High	683808
117-81-7	31-33 Week(s), (33 Week(s))	*Sus scrofa* (Pig), Weanling, 3 Week(s), Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Reproduction (Reproduction-Velocity, Response Site: Sperm)	NOEL (300 mg/kg bdwt)	Reproductive/Teratogenic	High	683808
117-81-7	29-33 Week(s), (33 Week(s))	*Sus scrofa* (Pig), Weanling, 3 Week(s), Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Growth (Development-Deformation, Response Site: Not reported)	LOEL (300 mg/kg bdwt)	Reproductive/Teratogenic	High	683808
117-81-7	29-33 Week(s), (33 Week(s))	*Sus scrofa* (Pig), Weanling, 3 Week(s), Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Gavage, 8 Organism	Unmeasured	0 mg/kg bdwt / 300 mg/kg bdwt	Cellular (Cell(s)-Membrane Integrity, Response Site: Sperm)	NOEL (300 mg/kg bdwt)	Mechanistic: Cytotoxicity	High	683808

* If multiple extractions contained all identical information except the effect level, extraction rows were collapsed and the differing levels are listed by comma in this row.

Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	NA Brood or litter, (NA Brood or litter)	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 1.5 mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEL (1.5 mg/L)	Reproductive/Teratogenic	Medium	5593882
117-81-7	NA Brood or litter, (NA Brood or litter)	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 1.5 mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEL (0.1 mg/L)	Reproductive/Teratogenic	Medium	5593882
117-81-7	3 Day(s), (7 Day(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 1.5 mg/L	Physiology (Physiology-Lipid peroxidation, Response Site: Not reported)	NOEL (1.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	5593882
117-81-7	3 Day(s), (7 Day(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 1.5 mg/L	Physiology (Physiology-Excretion rate, Response Site: Not reported)	NOEL (1.5 mg/L)	Nutritional and Metabolic	Medium	5593882

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Day(s), (7 Day(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 1.5 mg/L	Cellular (Genetics-NifU_N domain-containing protein mRNA, Response Site: Not reported)	NOEL (1.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	5593882
117-81-7	3 Day(s), (7 Day(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 1.5 mg/L	Physiology (Physiology-Contraction rate, Response Site: Not reported)	NOEL (1.5 mg/L)	Nutritional and Metabolic	Medium	5593882
117-81-7	3 Day(s), (7 Day(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 1.5 mg/L	Cellular (Genetics-HSP70 mRNA, Response Site: Not reported)	LOEL (1.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	5593882
117-81-7	3 Day(s), (7 Day(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 1.5 mg/L	Biochemical (Biochemistry-Lipofuscin, Response Site: Not reported)	NOEL (1.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	5593882

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	3 Day(s), (7 Day(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 1.5 mg/L	Biochemical (Biochemistry-Reactive oxygen species, Response Site: Not reported)	NOEL (1.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	5593882
117-81-7	3 Day(s), (7 Day(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 1.5 mg/L	Cellular (Genetics-Heat shock protein Hsp-16.1/Hsp-16.11 mRNA, Response Site: Not reported)	NOEL (1.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	5593882
117-81-7	3 Day(s), (7 Day(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 1.5 mg/L	Cellular (Genetics-Heat shock protein Hsp-16.48/Hsp-16.49 mRNA, Response Site: Not reported)	NOEL (1.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	5593882
117-81-7	72 Hour(s), (72 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 1.5 mg/L	Behavior (Behavior-Movements, number of, Response Site: Not reported)	LOEL (0.1 mg/L)	Behavioral	Medium	5593882

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (7 Day(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 1.5 mg/L	Cellular (Genetics-NifU_N domain-containing protein mRNA, Response Site: Not reported)	NOEL (1.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	5593882
117-81-7	7 Day(s), (7 Day(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 1.5 mg/L	Biochemical (Biochemistry-Lipofuscin, Response Site: Not reported)	LOEL (1.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	5593882
117-81-7	7 Day(s), (7 Day(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 1.5 mg/L	Biochemical (Biochemistry-Reactive oxygen species, Response Site: Not reported)	LOEL (1.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	5593882
117-81-7	7 Day(s), (7 Day(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 1.5 mg/L	Cellular (Genetics-HSP70 mRNA, Response Site: Not reported)	LOEL (1.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	5593882

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (7 Day(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 1.5 mg/L	Cellular (Genetics-Heat shock protein Hsp-16.1/Hsp-16.11 mRNA, Response Site: Not reported)	LOEL (1.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	5593882
117-81-7	7 Day(s), (7 Day(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 1.5 mg/L	Cellular (Genetics-Heat shock protein Hsp-16.48/Hsp-16.49 mRNA, Response Site: Not reported)	LOEL (1.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity	Medium	5593882
117-81-7	7 Day(s), (7 Day(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 1.5 mg/L	Physiology (Physiology-Contraction rate, Response Site: Not reported)	LOEL (1.5 mg/L)	Nutritional and Metabolic	Medium	5593882
117-81-7	7 Day(s), (7 Day(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 1.5 mg/L	Physiology (Physiology-Excretion rate, Response Site: Not reported)	LOEL (1.5 mg/L)	Nutritional and Metabolic	Medium	5593882

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	7 Day(s), (7 Day(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 1.5 mg/L	Physiology (Physiology-Lipid peroxidation, Response Site: Not reported)	LOEL (1.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	5593882
117-81-7	7 Day(s), (7 Day(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 1.5 mg/L	Physiology (Physiology-Lipid peroxidation, Response Site: Not reported)	NOEL (1.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	5593882
117-81-7	16.3 Day(s), (31-35 Day(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Growth medium, Not Reported	Unmeasured	0 mg/L / 1.5 mg/L	Mortality (Mortality-Lifespan, Response Site: Not reported)	LOEL (1.5 mg/L)	Mortality	Medium	5593882
117-81-7	72 Hour(s), (72 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0.2 mg/L / 2 mg/L / 20 mg/L / 100 mg/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	LOEL (0.2 mg/L)	Reproductive/Teratogenic	Medium	5555457
117-81-7	72 Hour(s), (72 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0.2 mg/L / 2 mg/L / 20 mg/L / 100 mg/L	Behavior (Behavior-Head lift, Response Site: Not reported)	LOEL (0.2 mg/L)	Behavioral	Medium	5555457

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	72 Hour(s), (72 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0.2 mg/L / 2 mg/L / 20 mg/L / 100 mg/L	Behavior (Behavior-Movements, number of, Response Site: Not reported)	LOEL (0.2 mg/L)	Behavioral	Medium	5555457
117-81-7	72 Hour(s), (72 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 20 mg/L	Behavior (Behavior-Head lift, Response Site: Not reported)	LOEL (20 mg/L)	Behavioral	Medium	5555457
117-81-7	72 Hour(s), (72 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 20 mg/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	LOEL (20 mg/L)	Reproductive/Teratogenic	Medium	5555457
117-81-7	72 Hour(s), (72 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 20 mg/L	Cellular (Genetics-Vitellogenin 2 mRNA, Response Site: Not reported)	LOEL (20 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Epigenetics	Medium	5555457
117-81-7	72 Hour(s), (72 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 20 mg/L	Cellular (Genetics-Lysine (K)-specific demethylase 5Ba mRNA, Response Site: Not reported)	NOEL (20 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Epigenetics	Medium	5555457
117-81-7	72 Hour(s), (72 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 20 mg/L	Behavior (Behavior-Movements, number of, Response Site: Not reported)	LOEL (20 mg/L)	Behavioral	Medium	5555457

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	72 Hour(s), (72 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 1 Stage, Not Reported, Laboratory	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 20 mg/L	Cellular (Genetics-Vitellogenin 6 mRNA, Response Site: Not reported)	LOEL (20 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Epigenetics	Medium	5555457
117-81-7	1 Day(s), (NA Lifetime;no associated numeric value)	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEL (1 uM)	Reproductive/Teratogenic	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Fibroblast growth factor 2 mRNA, Response Site: Not reported)	LOEL (1 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-BHLH domain-containing protein mRNA, Response Site: Not reported)	NR (1-10 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Glutathione S-transferase 4 mRNA, Response Site: Not reported)	LOEL (1 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-SMAll mRNA, Response Site: Not reported)	LOEL (10 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Cation Diffusion Facilitator family mRNA, Response Site: Not reported)	NOEL (1 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Cell death abnormality protein 1 mRNA, Response Site: Not reported)	NOEL (1 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Cytochrome b-c1 complex subunit Rieske, mitochondrial mRNA, Response Site: Not reported)	NOEL (1 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Mitogen-activated protein kinase 8b mRNA, Response Site: Not reported)	NOEL (1 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Mitogen-activated protein kinase pmk-1 mRNA, Response Site: Not reported)	NOEL (1 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Cell death abnormality protein 1 mRNA, Response Site: Not reported)	LOEL (10 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-SMAll mRNA, Response Site: Not reported)	NOEL (1 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	2 Day(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 0.1 uM / 1 uM / 10 uM / 100 uM	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (100 uM)	Mortality	Uninformative	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Heat shock protein 90 mRNA, Response Site: Not reported)	NR (1-10 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Polarity and osmotic sensitivity defect-2 mRNA, Response Site: Not reported)	NR (1-10 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Cytochrome b-c1 complex subunit Rieske, mitochondrial mRNA, Response Site: Not reported)	LOEL (10 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	2 Day(s), (NA Lifetime;no associated numeric value)	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEL (1 uM)	Reproductive/Teratogenic	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Heat shock protein Hsp-16.48/Hsp-16.49 mRNA, Response Site: Not reported)	LOEL (1 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Stress-induced protein 1 mRNA, Response Site: Not reported)	NOEL (10 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Young adult, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Biochemical (Biochemistry-Lipid, Response Site: Not reported)	LOEL (1 uM)	Nutritional and Metabolic	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Mitogen-activated protein kinase 8b mRNA, Response Site: Not reported)	LOEL (10 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Fatty Acid CoA Synthetase family mRNA, Response Site: Not reported)	LOEL (1 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Cation Diffusion Facilitator family mRNA, Response Site: Not reported)	LOEL (10 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Worm AIF (Apoptosis inducing factor) Homolog mRNA, Response Site: Not reported)	LOEL (1 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Vitellogenin 6 mRNA, Response Site: Not reported)	LOEL (1 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Vitellogenin 5 mRNA, Response Site: Not reported)	LOEL (1 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Vitellogenin 4 mRNA, Response Site: Not reported)	LOEL (1 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Vitellogenin 2 mRNA, Response Site: Not reported)	LOEL (1 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Mitogen-activated protein kinase pmk-1 mRNA, Response Site: Not reported)	LOEL (10 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Putative cystathionine gamma-lyase 2 mRNA, Response Site: Not reported)	LOEL (1 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Heavy metal tolerance factor 1 mRNA, Response Site: Not reported)	LOEL (1 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Heat shock protein Hsp-16.1/Hsp-16.11 mRNA, Response Site: Not reported)	LOEL (1 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Young adult, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Growth (Growth-Area, Response Site: Whole organism)	NOEL (10 uM)	Development/Growth	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Fatty acid synthase 1 mRNA, Response Site: Not reported)	LOEL (1 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Fatty acid desaturase 5 mRNA, Response Site: Not reported)	LOEL (1 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Protein lgg-1 mRNA, Response Site: Not reported)	LOEL (1 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	48 Hour(s), (48 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Catalase-1 mRNA, Response Site: Not reported)	LOEL (1 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	4728405
117-81-7	3 Day(s), (NA Lifetime;no associated numeric value)	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEL (1 uM)	Reproductive/Teratogenic	High	4728405
117-81-7	4 Day(s), (NA Lifetime;no associated numeric value)	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEL (1 uM)	Reproductive/Teratogenic	High	4728405

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	5 Day(s), (NA Lifetime;no associated numeric value)	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEL (1 uM)	Reproductive/Teratogenic	High	4728405
117-81-7	14 Day(s), (NA Lifetime;no associated numeric value)	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (GIFT FROM DR. PETER SWOBODA, KAROLINSKA INSTITUTE)	Agar, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 uM / 1 uM	Mortality (Mortality-Lifespan, Response Site: Not reported)	LOEL (1 uM)	Other (please specify below)	Medium	4728405
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Young adult, 3 Day(s), Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 mg/L / 0.02 mg/L / 0.2 mg/L / 2 mg/L	Cellular (Genetics-Gene expression, Response Site: Whole organism)	NR (0.02-2 mg/L)	Mechanistic: Cell signaling/function	Uninformative	698288
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Young adult, 3 Day(s), Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC90 (139.4 (55.75-5611) mg/L)	Mortality	Medium	698288
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Young adult, 3 Day(s), Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 mg/L / 0.02 mg/L / 0.2 mg/L / 2 mg/L	Growth (Growth-Length, Response Site: Whole organism)	NR (0.02-2 mg/L)	Development/Growth	Uninformative	698288
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Young adult, 3 Day(s), Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 mg/L / 0.02 mg/L / 0.2 mg/L / 2 mg/L	Reproduction (Reproduction-Fecundity, Response Site: Whole organism)	NR (0.02-2 mg/L)	Reproductive/Teratogenic	Uninformative	698288

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Not reported, Not Reported, Laboratory (NR)	Not reported, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 2 mg/L	Biochemical (Biochemistry-Enhanced green fluorescent protein, Response Site: Whole organism)	NR (2 mg/L)	Mechanistic: Cell signaling/function	Uninformative	698288
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Young adult, 3 Day(s), Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC10 (3.650 (0.016-11.33) mg/L)	Mortality	Medium	698288
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Young adult, 3 Day(s), Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (22.55 (4.200-56.63) mg/L)	Mortality	Medium	698288
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva (Measured in: Adult), Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, >5000 Adult	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Nondisjunction, Response Site: Not reported)	LOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER, UNIVERSITY OF MINNESOTA, MN, USA)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 ppm / 2 ppm / 20 ppm	Behavior (Behavior-Distance moved, change in direct movement, Response Site: Not reported)	LOEL (2 ppm)	Behavioral	High	2215375

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER, UNIVERSITY OF MINNESOTA, MN, USA)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 ppm / 2 ppm	Cellular (Genetics-TAX2 mRNA, Response Site: Not reported)	LOEL (2 ppm)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	2215375
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER, UNIVERSITY OF MINNESOTA, MN, USA)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 ppm / 2 ppm	Cellular (Genetics-Homeodomain protein TTX-1 mRNA, Response Site: Not reported)	LOEL (2 ppm)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	2215375
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER, UNIVERSITY OF MINNESOTA, MN, USA)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 ppm / 2 ppm	Cellular (Genetics-Cyclic nucleotide-gated cation channel mRNA, Response Site: Not reported)	LOEL (2 ppm)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	2215375

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER, UNIVERSITY OF MINNESOTA, MN, USA)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 ppm / 0.2 ppm / 1 ppm / 2 ppm / 20 ppm	Behavior (Behavior-Reversals, Response Site: Not reported)	NOEL (1 ppm)	Behavioral	High	2215375
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER, UNIVERSITY OF MINNESOTA, MN, USA)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 ppm / 0.2 ppm / 1 ppm / 2 ppm / 20 ppm	Behavior (Behavior-Movements, number of, Response Site: Not reported)	NOEL (1 ppm)	Behavioral	High	2215375
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER, UNIVERSITY OF MINNESOTA, MN, USA)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 ppm / 0.2 ppm / 1 ppm / 2 ppm / 20 ppm	Behavior (Behavior-Reversals, Response Site: Not reported)	LOEL (2 ppm)	Behavioral	High	2215375

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER, UNIVERSITY OF MINNESOTA, MN, USA)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 ppm / 0.2 ppm / 1 ppm / 2 ppm / 20 ppm	Behavior (Behavior-Movements, number of, Response Site: Not reported)	LOEL (2 ppm)	Behavioral	High	2215375
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER, UNIVERSITY OF MINNESOTA, MN, USA)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 ppm / 0.2 ppm / 1 ppm / 2 ppm / 20 ppm	Behavior (Behavior-Distance moved, change in direct movement, Response Site: Not reported)	LOEL (0.2 ppm)	Behavioral	High	2215375
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER, UNIVERSITY OF MINNESOTA, MN, USA)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 ppm / 2 ppm	Cellular (Genetics-Homeobox protein ceh-14 mRNA, Response Site: Not reported)	LOEL (2 ppm)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	2215375

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER, UNIVERSITY OF MINNESOTA, MN, USA)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 ppm / 2 ppm / 20 ppm	Cellular (Cell(s)-Size, Response Site: Neuron)	LOEL (2 ppm)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair); Oxidative stress (including redox biology)	High	2215375
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER, UNIVERSITY OF MINNESOTA, MN, USA)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 ppm / 2 ppm / 20 ppm	Biochemical (Biochemistry-Reactive oxygen species, Response Site: Not reported)	LOEL (2 ppm)	Mechanistic: Oxidative stress (including redox biology)	High	2215375
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER, UNIVERSITY OF MINNESOTA, MN, USA)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 ppm / 2 ppm / 20 ppm	Behavior (Behavior-Reversals, Response Site: Not reported)	LOEL (2 ppm)	Behavioral	High	2215375

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER, UNIVERSITY OF MINNESOTA, MN, USA)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 ppm / 2 ppm / 20 ppm	Behavior (Behavior-Movements, number of, Response Site: Not reported)	LOEL (2 ppm)	Behavioral	High	2215375
117-81-7	24 Hour(s), (75 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (SCHOOL OF MEDICINE, SOUTHEAST UNIVERSITY, NANJING, CHINA)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Cellular (Genetics-Programmed cell death activator egl-1 mRNA, Response Site: Not reported)	LOEL (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Genotox (including DNA repair)	Medium	4829298
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (SCHOOL OF MEDICINE, SOUTHEAST UNIVERSITY, NANJING, CHINA)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.01 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L / 100 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEL (100 mg/L)	Mortality	Medium	4829298

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (SCHOOL OF MEDICINE, SOUTHEAST UNIVERSITY, NANJING, CHINA)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.01 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L / 100 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>100 mg/L)	Mortality	Medium	4829298
117-81-7	24 Hour(s), (75 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (SCHOOL OF MEDICINE, SOUTHEAST UNIVERSITY, NANJING, CHINA)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Cellular (Genetics-p53 mRNA, Response Site: Not reported)	LOEL (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Genotox (including DNA repair)	Medium	4829298
117-81-7	24 Hour(s), (75 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (SCHOOL OF MEDICINE, SOUTHEAST UNIVERSITY, NANJING, CHINA)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Cellular (Genetics-Abhydrolase domain containing 4 mRNA, Response Site: Not reported)	LOEL (1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Genotox (including DNA repair)	Medium	4829298
117-81-7	24 Hour(s), (75 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (SCHOOL OF MEDICINE, SOUTHEAST UNIVERSITY, NANJING, CHINA)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Cellular (Genetics-BCL2 associated agonist of cell death mRNA, Response Site: Not reported)	LOEL (1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Genotox (including DNA repair)	Medium	4829298

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Cellular (Histology-Ultrastructural changes, Response Site: Gonad(s))	NOEL (10 mg/L)	Reproductive/Teratogenic	Medium	4829298
117-81-7	24 Hour(s), (75 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (SCHOOL OF MEDICINE, SOUTHEAST UNIVERSITY, NANJING, CHINA)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Biochemical (Biochemistry-Hydrogen peroxide, Response Site: Not reported)	NOEL (10 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Genotox (including DNA repair)	Medium	4829298
117-81-7	24 Hour(s), (75 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (SCHOOL OF MEDICINE, SOUTHEAST UNIVERSITY, NANJING, CHINA)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Cellular (Genetics-Succinate dehydrogenase complex subunit C mRNA, Response Site: Not reported)	NOEL (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Genotox (including DNA repair)	Medium	4829298
117-81-7	24 Hour(s), (75 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (SCHOOL OF MEDICINE, SOUTHEAST UNIVERSITY, NANJING, CHINA)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Cellular (Genetics-NADH dehydrogenase subunit 1 mRNA, Response Site: Not reported)	NOEL (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Genotox (including DNA repair)	Medium	4829298

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (75 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (SCHOOL OF MEDICINE, SOUTHEAST UNIVERSITY, NANJING, CHINA)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Cellular (Genetics-Death associated protein 3 mRNA, Response Site: Not reported)	NOEL (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Genotox (including DNA repair)	Medium	4829298
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Cellular (Genetics-Damage, Response Site: Oocyte)	NOEL (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Genotox (including DNA repair)	Medium	4829298
117-81-7	24 Hour(s), (75 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (SCHOOL OF MEDICINE, SOUTHEAST UNIVERSITY, NANJING, CHINA)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Cellular (Genetics-Damage, Response Site: Not reported)	NOEL (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Genotox (including DNA repair)	Medium	4829298
117-81-7	24 Hour(s), (75 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (SCHOOL OF MEDICINE, SOUTHEAST UNIVERSITY, NANJING, CHINA)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Cellular (Genetics-BCL2 associated agonist of cell death mRNA, Response Site: Not reported)	NOEL (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Genotox (including DNA repair)	Medium	4829298

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Cellular (Genetics-Apoptosis, Response Site: Oocyte)	NOEL (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Genotox (including DNA repair)	Medium	4829298
117-81-7	24 Hour(s), (75 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (SCHOOL OF MEDICINE, SOUTHEAST UNIVERSITY, NANJING, CHINA)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Cellular (Genetics-Abhydrolase domain containing 4 mRNA, Response Site: Not reported)	NOEL (0.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Genotox (including DNA repair)	Medium	4829298
117-81-7	24 Hour(s), (75 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (SCHOOL OF MEDICINE, SOUTHEAST UNIVERSITY, NANJING, CHINA)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Cellular (Genetics-Succinate dehydrogenase complex subunit C mRNA, Response Site: Not reported)	LOEL (1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Genotox (including DNA repair)	Medium	4829298
117-81-7	24 Hour(s), (75 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (SCHOOL OF MEDICINE, SOUTHEAST UNIVERSITY, NANJING, CHINA)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Cellular (Genetics-NADH dehydrogenase subunit 1 mRNA, Response Site: Not reported)	LOEL (1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Genotox (including DNA repair)	Medium	4829298

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	24 Hour(s), (75 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (SCHOOL OF MEDICINE, SOUTHEAST UNIVERSITY, NANJING, CHINA)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Cellular (Genetics-Death associated protein 3 mRNA, Response Site: Not reported)	LOEL (1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Genotox (including DNA repair)	Medium	4829298
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Cellular (Genetics-Damage, Response Site: Oocyte)	LOEL (1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Genotox (including DNA repair)	Medium	4829298
117-81-7	24 Hour(s), (75 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (SCHOOL OF MEDICINE, SOUTHEAST UNIVERSITY, NANJING, CHINA)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Cellular (Genetics-Damage, Response Site: Not reported)	LOEL (1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Genotox (including DNA repair)	Medium	4829298
117-81-7	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHABDITIS GENETICS CENTER)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Cellular (Genetics-Apoptosis, Response Site: Oocyte)	LOEL (1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cytotoxicity; Genotox (including DNA repair)	Medium	4829298

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	75 Hour(s), (75 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (SCHOOL OF MEDICINE, SOUTHEAST UNIVERSITY, NANJING, CHINA)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Reproduction (Reproduction-Germ cell count, Response Site: Not reported)	LOEL (1 mg/L)	Reproductive/Teratogenic	Medium	4829298
117-81-7	75 Hour(s), (75 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (SCHOOL OF MEDICINE, SOUTHEAST UNIVERSITY, NANJING, CHINA)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	LOEL (10 mg/L)	Reproductive/Teratogenic	Medium	4829298
117-81-7	75 Hour(s), (75 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (SCHOOL OF MEDICINE, SOUTHEAST UNIVERSITY, NANJING, CHINA)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Reproduction (Reproduction-Germ cell count, Response Site: Not reported)	NOEL (0.1 mg/L)	Reproductive/Teratogenic	Medium	4829298
117-81-7	75 Hour(s), (75 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (SCHOOL OF MEDICINE, SOUTHEAST UNIVERSITY, NANJING, CHINA)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEL (1 mg/L)	Reproductive/Teratogenic	Medium	4829298

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Terrestrial: Worms Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
117-81-7	75 Hour(s), (75 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, 4 Stage, Not Reported, Laboratory (SCHOOL OF MEDICINE, SOUTHEAST UNIVERSITY, NANJING, CHINA)	Culture, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Population (Population-Generation time, Response Site: Not reported)	NOEL (10 mg/L)	Reproductive/Teratogenic	Medium	4829298
117-81-7	48 Hour(s), (48 Hour(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (GROWN IN THE AUTHOR'S LABORATORY)	Filter paper, Environmental, Environmental, unspecified, Not Reported	Unmeasured	NR / NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (3140 (2270-4330) ug/cm2)	Mortality	Medium	3625226
117-81-7	48 Hour(s), (48 Hour(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (GROWN IN THE AUTHOR'S LABORATORY)	Filter paper, Environmental, Environmental, unspecified, Not Reported	Unmeasured	NR / NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (<=25000 ug/cm2)	Mortality	Medium	3625226

* If multiple extractions contained all identical information except the effect level, extraction rows were collapsed and the differing levels are listed by comma in this row.

Data Extraction of Rodent Data for the Application of Environmental Hazard

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Strain	Exposure Type	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Hazard Effect/ Hazard Level	Effect Level as reported by the Study Author(s)	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
75-34-3	One generation, (Two generations)	nan, Sampling Age:Adult Exposure Age: AdultF, Crj: CD-1,	Diet	Unmeasured	16.84, 46.58, 140.15	46.58	NOAEL	Reproduction/development - pup survival	Medium	732820
75-34-3	One generation, (Two generations)	nan, Sampling Age:Adult Exposure Age: AdultF, Crj: CD-1,	Diet	Unmeasured	16.84, 46.58, 140.15	140.15	LOAEL	Reproduction/development - pup survival	Medium	732820

Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
No guideline or compliance documents were specified. Rat-Long-Evans - [rat]-Male	Oral-Gavage-Duration: Short-term (>1-30 days)-7-14-day(s) 7 days/week 14 day(s) PND 21-34	**POD: 1 mg/kg-bw/day (NOAEL) -changes in serum LH and testosterone.** n= 10 Dose= 0, n= 10 Dose= 1, n= 10 Dose= 10, n= 10 Dose= 100, Dose= 200, mg/kg-bw/day	Weanling, prepubertal Long Evans rats (10 males/group) were administered DEHP in corn oil via oral gavage at doses of 0 (vehicle only), 1, 10, 100, or 200 mg/kg/day for 14 days (PND 35-48). Body weights and food consumption were recorded. The testes and seminal vesicles (with coagulating glands) were weighed. Serum hormone levels (testosterone and LH) and Leydig cell testosterone production (basal and LH-stimulated) were measured. Sterodogenic enzyme activity of cytochrome P450 cholesterol side-chain cleavage enzyme (P450scc), 3β-HSD, cytochrome P450 17α-hydroxylase/17,20 lyase (P45017α), and 17β -hydroxysteroid dehyrogenase (17β-HSD). was measured. Histological evaluations were conducted on the testes. There were no treatment-related effects on body weight, serum hormone levels, or testes and seminal vesicle weights. In groups treated with 10 mg/kg/day or higher, Leydig cell testosterone production (basal and LH-stimulated) was significantly decreased. Decreased androgen biosynthesis was associated with steroidogenic enzyme activity inhibition at 10 mg/kg/day and higher. Significantly decreased17β-HSD was observed at 10 mg/kg/day. Significantly decreased P450SCC, 3β-HSD, and 17β-HSD was observed at 100 mg/kg/day. Significantly decreased P450SCC, 3β-HSD, P45017α, and 17β-HSD was observed at 200 mg/kg/day. Histology showed no evidence of Leydig cell hyperplasia, seminiferous tubule damage, germ cell degeneration, or delayed spermiation in any group. Study authors concluded that DEHP affects Leydig cell function and steroidogenesis. The NOAEL was 1 mg/kg/day, and the LOAEL was 10 mg/kg/day based on changes in serum LH and testosterone.	The study did not describe whether measures were taken to reduce contaminate exposure to plasticises in a study looking at reproductive and/or developmental endpoints. No details were provided for the preparation of the test substance; concentrations were not analytically verified, and the gavage volume was not reported.	Reproductive/Developmental-Leydig cell testosterone production, serum testosterone and LH measurements, testicular histology and weight, seminal vesicles weight-Nutritional/Metabolic-Body weight and food consumption in dams and young adult rats; Medium	Akingbemi et-al 2001 673553

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Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
No guideline or compliance documents were specified. Rat-Long-Evans - [rat]-Male	Oral-Gavage-Duration: Short-term (>1-30 days)-7-14-day(s) 7 days/week 14 day(s) PND 35-48	**POD: 1 mg/kg-bw/day (NOAEL) -changes in serum LH and testosterone.** n= 10 Dose= 0, n= 10 Dose= 1, n= 10 Dose= 10, n= 10 Dose= 100, Dose= 200, mg/kg-bw/day	Weanling, prepubertal Long Evans rats (10 males/group) were administered DEHP in corn oil via oral gavage at doses of 0 (vehicle only), 1, 10, 100, or 200 mg/kg/day for 14 days (PND 35-48). Body weights and food consumption were recorded. The testes and seminal vesicles (with coagulating glands) were weighed. Serum hormone levels (testosterone and LH) and Leydig cell testosterone production (basal and LH-stimulated) were measured. Sterodogenic enzyme activity of cytochrome P450 cholesterol side-chain cleavage enzyme (P450scc), 3β-HSD, cytochrome P450 17α-hydroxylase/17,20 lyase (P45017α), and 17β -hydroxysteroid dehyrogenase (17β-HSD). was measured. Histological evaluations were conducted on the testes. There were no treatment-related effects on body weight, serum hormone levels, or testes and seminal vesicle weights. In groups treated with 10 mg/kg/day or higher, Leydig cell testosterone production (basal and LH-stimulated) was significantly decreased. Decreased androgen biosynthesis was associated with steroidogenic enzyme activity inhibition at 10 mg/kg/day and higher. Significantly decreased17β-HSD was observed at 10 mg/kg/day. Significantly decreased P450SCC, 3β-HSD, and 17β-HSD was observed at 100 mg/kg/day. Significantly decreased P450SCC, 3β-HSD, P45017α, and 17β-HSD was observed at 200 mg/kg/day. Histology showed no evidence of Leydig cell hyperplasia, seminiferous tubule damage, germ cell degeneration, or delayed spermiation in any group. Study authors concluded that DEHP affects Leydig cell function and steroidogenesis. The NOAEL was 1 mg/kg/day, and the LOAEL was 10 mg/kg/day based on changes in serum LH and testosterone.	The study did not describe whether measures were taken to reduce contaminate exposure to plasticises in a study looking at reproductive and/or developmental endpoints. No details were provided for the preparation of the test substance; concentrations were not analytically verified, and the gavage volume was not reported.	Reproductive/Developmental-Leydig cell testosterone production, serum testosterone and LH measurements, testicular histology and weight, seminal vesicles weight-Nutritional/Metabolic-Body weight and food consumption in dams and young adult rats; Medium	Akingbemi et-al 2001 673553

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Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
No guideline or compliance documents were specified. Rat-Long-Evans - [rat]-Male	Oral-Gavage-Duration: Short-term (>1-30 days)-7-28-day(s) 7 days/week 28 day(s) PND 21-48	**POD: 1 mg/kg-bw/day (NOAEL) -changes in serum LH and testosterone.** n= 10 Dose= 0, n= 10 Dose= 1, n= 10 Dose= 10, n= 10 Dose= 100, Dose= 200, mg/kg-bw/day	Weanling, prepubertal Long Evans rats (10 males/group) were administered DEHP in corn oil via oral gavage at doses of 0 (vehicle only), 1, 10, 100, or 200 mg/kg/day for 28 days (PND 21-48). Body weights and food consumption were recorded. The testes and seminal vesicles (with coagulating glands) were weighed. Serum hormone levels (testosterone and LH) and Leydig cell testosterone production (basal and LH-stimulated) were measured. Histological evaluations were conducted on the testes. There were no treatment-related effects on body weights, testes weights or seminal vesicle weights. A dose-dependent increase in serum concentrations of testosterone and LH was observed with significance at 10, 100, and 200 mg/kg/day. Testicular interstitial fluid testosterone levels were increased significantly for the 10, 100, and 200 mg/kg/day groups. Leydig cell testosterone production (basil and LH-stimulated) was significantly increased at 10, 100, and 200 mg/kg/day. Histology showed no evidence of Leydig cell hyperplasia, seminiferous tubule damage, germ cell degeneration, or delayed spermiation in any group. Study authors concluded that DEHP affects Leydig cell function and steroidogenesis. The NOAEL was 1 mg/kg/day, and the LOAEL was 10 mg/kg/day based on changes in serum LH and testosterone.	The study did not describe whether measures were taken to reduce contaminate exposure to plasticises in a study looking at reproductive and/or developmental endpoints. No details were provided for the preparation of the test substance; concentrations were not analytically verified, and the gavage volume was not reported.	Reproductive/Developmental-Leydig cell testosterone production, serum testosterone and LH measurements, testicular histology and weight, seminal vesicles weight-Nutritional/Metabolic-Body weight and food consumption in dams and young adult rats; Medium	Akingbemi et-al 2001 673553

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Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
No guideline or compliance documents were specified. Rat-Long-Evans - [rat]-Male	Oral-Gavage-Duration: Short-term (>1-30 days)-7-28-day(s) 7 days/week 28 day(s) PND 21-48	**POD: 1 mg/kg-bw/day (NOAEL) -changes in serum LH and testosterone.** n= 10 Dose= 0, n= 10 Dose= 1, n= 10 Dose= 10, n= 10 Dose= 100, Dose= 200, mg/kg-bw/day	Weanling, prepubertal Long Evans rats (10 males/group) were administered DEHP in corn oil via oral gavage at doses of 0 (vehicle only), 1, 10, 100, or 200 mg/kg/day for 28 days (PND 21-48). Body weights and food consumption were recorded. The testes and seminal vesicles (with coagulating glands) were weighed. Serum hormone levels (testosterone and LH) and Leydig cell testosterone production (basal and LH-stimulated) were measured. Histological evaluations were conducted on the testes. There were no treatment-related effects on body weights, testes weights or seminal vesicle weights. A dose-dependent increase in serum concentrations of testosterone and LH was observed with significance at 10, 100, and 200 mg/kg/day. Testicular interstitial fluid testosterone levels were increased significantly for the 10, 100, and 200 mg/kg/day groups. Leydig cell testosterone production (basil and LH-stimulated) was significantly increased at 10, 100, and 200 mg/kg/day. Histology showed no evidence of Leydig cell hyperplasia, seminiferous tubule damage, germ cell degeneration, or delayed spermiation in any group. Study authors concluded that DEHP affects Leydig cell function and steroidogenesis. The NOAEL was 1 mg/kg/day, and the LOAEL was 10 mg/kg/day based on changes in serum LH and testosterone.	The study did not describe whether measures were taken to reduce contaminate exposure to plasticises in a study looking at reproductive and/or developmental endpoints. No details were provided for the preparation of the test substance; concentrations were not analytically verified, and the gavage volume was not reported.	Reproductive/Development-Leydig cell testosterone production, serum testosterone and LH measurements, testicular histology and weight, seminal vesicles weight-Nutritional/Metabolic-Body weight and food consumption in dams and young adult rats; Medium	Akingbemi et-al 2001 673553

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Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
No guideline or compliance documents were specified. Rat-Long-Evans - [rat]-Male	Oral-Gavage-Duration: Short-term (>1-30 days)-7-28-day(s) 7 days/week 28 day(s) PND 62-89	**POD: 200 mg/kg-bw/day (NOAEL) -No adverse effects.** n= 10 Dose= 0, n= 10 Dose= 1, n= 10 Dose= 10, n= 10 Dose= 100, Dose= 200, mg/kg-bw/day	Young adult Long Evans rats (10 males/group) were administered DEHP in corn oil via oral gavage at doses of 0 (vehicle only), 1, 10, 100, or 200 mg/kg/day for 28 days (PND 62-89). Body weights and food consumption were recorded. The testes and seminal vesicles (with coagulating glands) were weighed. Serum hormone levels (testosterone and LH) and Leydig cell testosterone production (basal and LH-stimulated) were measured. Histological evaluations were conducted on the testes. There were no treatment-related effects on serum hormone levels or Leydig cell testosterone production. Histology showed no evidence of Leydig cell hyperplasia, seminiferous tubule damage, germ cell degeneration, or delayed spermiation in any group. The study authors concluded that DEHP had no effect on reproductive parameters in young adult rats. Other studies suggest that growing rats are more susceptible to the effects of DEHP and its metabolites than adults. The NOAEL was 200 mg/kg/day based on no adverse effects at the highest dose testes	The study did not describe whether measures were taken to reduce contaminate exposure to plasticises in a study looking at reproductive and/or developmental endpoints. No details were provided for the preparation of the test substance; concentrations were not analytically verified, and the gavage volume was not reported. Quantitative results were not reported.	Reproductive/Development-Leydig cell testosterone production, serum testosterone and LH measurements, testicular histology and weight, seminal vesicles weight-Nutritional/Metabolic-Body weight and food consumption in dams and young adult rats; Medium	Akingbemi et-al 2001 673553
No guideline or compliance documents were specified. Rat-Long-Evans - [rat]-Male	Oral-Gavage-Duration: Short-term (>1-30 days)-7-28-day(s) 7 days/week 28 day(s) PND 62-89	**POD: 200 mg/kg-bw/day (NOAEL) -No adverse effects.** n= 10 Dose= 0, n= 10 Dose= 1, n= 10 Dose= 10, n= 10 Dose= 100, Dose= 200, mg/kg-bw/day	Young adult Long Evans rats (10 males/group) were administered DEHP in corn oil via oral gavage at doses of 0 (vehicle only), 1, 10, 100, or 200 mg/kg/day for 28 days (PND 62-89). Body weights and food consumption were recorded. The testes and seminal vesicles (with coagulating glands) were weighed. Serum hormone levels (testosterone and LH) and Leydig cell testosterone production (basal and LH-stimulated) were measured. Histological evaluations were conducted on the testes. There were no treatment-related effects on serum hormone levels or Leydig cell testosterone production. Histology showed no evidence of Leydig cell hyperplasia, seminiferous tubule damage, germ cell degeneration, or delayed spermiation in any group. The study authors concluded that DEHP had no effect on reproductive parameters in young adult rats. Other studies suggest that growing rats are more susceptible to the effects of DEHP and its metabolites than adults. The NOAEL was 200 mg/kg/day based on no adverse effects at the highest dose testes	The study did not describe whether measures were taken to reduce contaminate exposure to plasticises in a study looking at reproductive and/or developmental endpoints. No details were provided for the preparation of the test substance; concentrations were not analytically verified, and the gavage volume was not reported. Quantitative results were not reported.	Reproductive/Development-Leydig cell testosterone production, serum testosterone and LH measurements, testicular histology and weight, seminal vesicles weight-Nutritional/Metabolic-Body weight and food consumption in dams and young adult rats; Medium	Akingbemi et-al 2001 673553

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Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
All procedures involving animal handling were approved by the University of Illinois at Urbana-Champaign Institutional Animal Care and Use Committee (Protocol No.: 17079). Mouse-CD-1 - [mouse]-Female	Oral-Gavage-Duration: Short-term (>1-30 days)-7-10-day(s) 7 days/week 10 day(s) Female mice were dosed 10 consecutive days every morning at 2 h following the start of the light cycle.	**POD: 0.2 mg/kg-bw/day (LOAEL) -Increased percentage of preantral ovarian follicles** n= 12 Dose= 0, n= 4 Dose= 0.02, n= 4 Dose= .2, n= 4 Dose= 20, n= 4 Dose= 200, mg/kg-bw/day	The study doses female CD-1 mice orally via insertion of a pipette tip into the mouth, utilizes a control (corn oil vehicle), and includes a large range of doses: DEHP (20 μg/kg/day, 200 μg/kg/day, 20 mg/kg/day, and 200 mg/kg/day) and DINP 20 μg/kg/day, 100 μg/kg/day, 20 mg/kg/day, and 200 mg/kg/day). Dosing occurred at PND 39-40 for 10 days followed by various post-dosing assessments for ovarian follicle and sex hormone endpoints. For the 9-month post-dosing group used in histological analysis of ovarian follicle development and sex hormone assays: Histological analysis was done on adult female mice following exposure to DEHP. A significant POD was found in the percentage of preantral ovarian follicles in the 20 mg/kg/day and 200 mg/kg/day groups (n = 4–12 mice/group). No change in total follicle number was found between groups (data was not shown). Analysis of sex hormone levels in sera were measured for testosterone (n = 5-12 mice/group), progesterone (n = 5-12 mice/group), estradiol (n = 5-12 mice/group), and Inhibin B (n = 2-12 mice/group) using ELISAs and FSH (n = 5-12 mice/group) using a radioimmunoassay. No significant POD was found in these measurements.	Some major limitations include lack of clarity in different experimental metrics. This includes not giving the CASN or catalog number for the chemical of interest, not providing the exact number of animals per group, not listing the measure of variance per group (e.g., standard error, standard deviation, etc.), and not having sufficient sample sizes for some metrics.	Reproductive/Developmental Following 10 days of exposure at various post-dosing time points (e.g., immediately post-dosing, 3-, 6-, and 9-months post-dosing depending on the experiments) histological analysis of the follicular development in ovarian tissue samples and the sex hormone present in sera (e.g., testosterone, progesterone, estradiol, FSH, and Inhibin B) from adult female mice were analyzed.; Medium	Chiang et. al-2020 7978479

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Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
All animal handling procedures were approved by the University of Illinois at Urbana-Champaign Institutional Animal Care and Use Committee (Protocol No.: 17079). Mouse-CD-1 - [mouse]-Female	Oral-Gavage-Duration: Short-term (>1-30 days)-1-F0- premating (At PND 39-40 female mice were exposed for 10 days with a single oral dose/day) Female mice were dosed at age 39–40 days for 10 days with either vehicle control (corn oil), DEHP (20 μg/kg/day – 200 mg/kg/day), or DiNP (20 μg/ kg/day – 200 mg/kg/day)	**POD: 0.02 mg/kg-bw/day (NOAEL) -Number/type of follicles present, levels of sex hormone in sera** n= 12 Dose= 0, n= 4 Dose= 0.02, n= 4 Dose= 0.2, n= 4 Dose= 20, n= 4 Dose= 200, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0- premating, At PND 39-40 female mice were exposed for 10 days with a single oral dose/day	For the 18 months post-dosing group used in histological analysis and sex hormone assays: Histological analysis was done on ovarian tissue sections and follicle number/type were determined (control n = 12 mice/group, DEHP 20 μg/kg/day – 200 mg/kg/day n = 4–6 mice/group). Analysis of sex hormone levels in sera were also measured for testosterone, progesterone, and estradiol using commercially available using ELISAs (control n = 16 mice/group, DEHP 20 μg/kg/day – 200 mg/kg/day n = 7–11 mice/group), and for FSH and Inhibin B using a radioimmunoassay (control n = 16 mice/group, DEHP 20 μg/kg/day –200 mg/kg/day n = 7–11 mice/group).	Some major limitations include lack of clarity in different experimental metrics. This includes not giving the CASN or catalog number for the chemical of interest, not providing the exact number of animals per group, not listing the measure of variance per group (e.g., standard error, standard deviation, etc.), and not having sufficient sample sizes for some metrics.	Reproductive/Developmental- Post-dosing (12, 15, and 18 months depending on the experiments) estrous cyclicity presented as percent time spent in each stage (e.g., proestrus, estrus, metestrus/diestrus), raw number and quality assessment of follicles in the ovaries of mice following varying number of months post-dosing, duration to begin mating and overall gestational period, fertility index, number of female mice that gave birth at various months post-dosing, live pup weights, litter sizes, sex ratio, sex hormone levels (e.g., testosterone, progesterone, estradiol, FSH, and Inhibin B) at various months post-dosing.; Medium	Chiang et. al- 2020 7978481
Non-GLP and non-guideline study. Rat-Sprague-Dawley - [rat]-Male	Oral-Gavage-Duration: Short-term (>1-30 days)-5-5-day(s) 5 days/week 5 day(s) Five daily oral doses	**POD: 10 mg/kg-bw/day (NOAEL) -Decreased absolute testis weight in rats aged 21-25 days during dosing** Dose= 0, Dose= 10, Dose= 100, Dose= 1000, Dose= 2000, mg/kg-bw/day	See footnotes for full summary [1]	The major limitations of this study are a general lack of reporting, some of which was able to be determined from the companion study. The specific numbers of animals used in each group was not specified, and the results from each assay are not available for all of the age groups tested.	Reproductive/Developmental- Testis and epididymal weights, testis histopathology, testicular zinc concentrations, sperm counts, male fertility; High	Dostal et. al- 1988 63436

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Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
No guideline or adherence to GLP conditions was specified. Rat-Sprague-Dawley - [rat]-Male	Oral-Diet-Duration: Chronic (>90 days)-7-24-102-week(s) 7 days/week 2 week(s) Animals were exposed via the diet for 2 weeks	**POD: % (in water or food) (Other) -** Dose= 0, Dose= 0.2, Dose= 2, % (in water or food)	In a poorly described experiment that was "similar" to another experiment described, Sprague Dawley rats (presumably males, number/group not specified) were fed diets containing 0, 0.2, or 2% DEHP for 2 weeks. A subset of animals (5/group based on a similar study) were then sacrificed at the end of exposure (both treated and controls), and presumably 1, 2, and 3 weeks after being switched to normal diets (treatment groups only). At sacrifice, liver homogenate, mitochondrial, and microsomal fractions isolated for enzyme measurements: Catalase and palmitoyl-CoA (homogenate), carnitine acetyltransferase and cytochrome oxidase (mitochondria), and CYP-450 and NADPH cytochrome c reductase (microsomes). IThe study qualitatively reported that "enzyme levels that were increased returned to normal within two weeks."The statistical significance and adversity of these changes are unclear. No POD was determined.	Insufficient details about this study were provided in the report making this study uninformative.	Hepatic/Liver-Liver histology, (both light and electron microscopy); liver enzyme activities: catalase and palmitoyl-CoA (homogenate), carnitine acetyltransferase and cytochrome oxidase (mitochondria), and CYP-450, NADH and NADPH cytochrome c reductase (microsomes); Uninformative	Ganning et. al 1990 679540
No guidelines were reported. "All animal procedures were performed in accordance with the policies of The Rockefeller University's Animal Care and Use Committee (protocol 04059)" Rat-Long-Evans - [rat]-Male	Oral-Gavage-Duration: Short-term (>1-30 days)-7-28-day(s) 7 days/week 28 day(s) Exposed from PND 21-PND 48 (28 days)	**POD: 10 mg/kg-bw/day (LOAEL) -Earlier preputial separation, increased serum testosterone and seminal vesicle weight** n= 20 Dose= 0, n= 20 Dose= 10, n= 20 Dose= 500, n= 20 Dose= 750, mg/kg-bw/day	See footnotes for full summary [2]	The source and purity of the test substance were not reported. Gavage volume was not reported. The exact number of animals/group is not clear, and a reason for the exclusion of some animal data was not provided.	Reproductive/Development-Organ weight (testes, seminal vesicles, and prostate), timing of preputial separation, serum luteinizing hormone and testosterone levels, mRNA expression in pituitary for LH b subunit androgen receptor; testosterone production by isolated Leydig cells in vitro.; Medium	Ge et. al 2007 674162

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Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
No guidelines were reported. "All animal procedures were performed in accordance with the policies of The Rockefeller University's Animal Care and Use Committee (protocol 04059)" Rat-Long-Evans - [rat]-Male	Oral-Gavage-Duration: Short-term (>1-30 days)-7-14-day(s) 7 days/week 14 day(s) Exposed from PND 21-PND 34 (14 days)	**POD: 10 mg/kg-bw/day (NOAEL) -Decreased testosterone and absolute testes weight** n= 10 Dose= 0, n= 10 Dose= 10, n= 10 Dose= 500, mg/kg-bw/day	——————————————————————————To compare results to a longer (28-day duration) study, prepubertal Long-Evans male rats (presumed 10/group) were dosed with 0 or 500 mg/kg/day of DEHP in con oil, via gavage, from post-natal day 21 to 34 (14 days). Animals were sacrificed on PND 35. Data for a 10 mg/kg/day group were included in the data table for this study; however, this dose was not mentioned in the study methods for this experiment and is also not discussed in the study text. Endpoints evaluated included terminal body weight, serum levels of luteinizing hormone (LH) and testosterone, and organ weights (testes, seminal vesicle and prostate). Leydig cells were isolated from animals and cultured in vitro to measure testosterone production under basal condition or after stimulation with LH or 22(R)-hydroxycholesterol. No significant difference in terminal body weight was seen compared to control. Serum testosterone was significantly decreased (78%) at 500 mg/kg/day compared to control. No significant differences in serum LH levels were seen. Absolute testes weight was significantly decreased (29%) at 500 mg/kg/day compared to control. No other organ weights differed from control. Testosterone production from isolated Leydig cells was similar under basal condition and with LH stimulation in all groups. Stimulation with CHOL resulted in a 57-fold decrease in testosterone production in the 500 mg/kg/day group.The study authors did not report a POD. A NOAEL of 10 mg/kg/day and a LOAEL of 500 mg/kg/day were determined for this review based on decreased testosterone and absolute testes weight.	The source and purity of the test substance were not reported. Gavage volume was not reported. The dose groups used for this study were confusing.	Reproductive/Development Organ weight (testes, seminal vesicles, and prostate), timing of preputial separation, serum luteinizing hormone and testosterone levels, mRNA expression in pituitary for LH b subunit androgen receptor; testosterone production by isolated Leydig cells in vitro.; Medium	Ge et. al 2007 674162

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Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
The experimental protocol was approved by the Office for Work and Health Protection and Technical Safety of the State of Berlin in accordance with the German National Animal Protection Law (Tierschutzgesetz BGBI. I S. 1105, 1998). Rat-Wistar - [rat]-Female	Oral-Gavage-Duration: Short-term (>1-30 days)-1-F0 - gestation (GD6-to birth)-F0- lactation (birth-PND21) Pregnant dams were exposed to test substance from GD6-PND21	**POD: 5 mg/kg-bw/day (NOAEL) -Developmental: delays in pubertal onset in female offspring** n= 16 Dose= 0, n= 11 Dose= 0.015, n= 13 Dose= 0.045, n= 13 Dose= 0.135, n= 15 Dose= 0.405, n= 16 Dose= 1.215, n= 13 Dose= 5, n= 12 Dose= 15, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD6-to birth, F0- lactation, birth-PND21	See footnotes for full summary [3]	Study did not fully described preparation and storage conditions of DEHP.	Reproductive/Developmental-Ovary weightLitter size, sex ratio, pup weight, post implantation loss and number of viable pups were assessed.In offspring: clinical signs, were assessed; on PND1 brain and liver weights measured (1-2 females/litter); PND13, all female pups were examined for the number of nipples/areolas. On PND 22, measurement of anogenital distance (AGD) and brain and liver weights. Beginning on PND33, all remaining females were evaluated daily for vaginal opening. Body weights were measured on day of vaginal opening. Daily vaginal smears were assessed from the day of vaginal opening to detect first day of estrus.-Other (please specify below) (Clinical signs)-Clinical signs of toxicity-Neurological/Behavioral-Brain weight-Hepatic/Liver-Liver weight-Renal/Kidney-Kidney weight-Thyroid-Thyroid weight-Immune/Hematological-Spleen and thymus weight-Nutritional/Metabolic-Body weight of dams; Medium	Grande et. al-2006 674171

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Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
The experimental protocol was approved by the Office for Work and Health Protection and Technical Safety of the State of Berlin in accordance with the German National Animal Protection Law (Tierschutzgesetz BGBI. I S. 1105, 1998). Rat-Wistar - [rat]-Female	Oral-Gavage-Duration: Short-term (>1-30 days)-1-F0 - gestation (GD6-to birth)-F0- lactation (birth-PND21) Pregnant dams were exposed to test substance from GD6-PND21	**POD: 5 mg/kg-bw/day (NOAEL) -Developmental: delays in pubertal onset in female offspring** n= 16 Dose= 0, n= 11 Dose= 0.015, n= 13 Dose= 0.045, n= 13 Dose= 0.135, n= 15 Dose= 0.405, n= 16 Dose= 1.215, n= 13 Dose= 5, n= 12 Dose= 15, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD6-to birth, F0- lactation, birth-PND21	See footnotes for full summary [4]	Study did not fully described preparation and storage conditions of DEHP.	Reproductive/Developmental-Ovary weightLitter size, sex ratio, pup weight, post implantation loss and number of viable pups were assessed.In offspring: clinical signs, were assessed; on PND1 brain and liver weights measured (1-2 females/litter); PND13, all female pups were examined for the number of nipples/areolas. On PND 22, measurement of anogenital distance (AGD) and brain and liver weights. Beginning on PND33, all remaining females were evaluated daily for vaginal opening. Body weights were measured on day of vaginal opening. Daily vaginal smears were assessed from the day of vaginal opening to detect first day of estrus.-Other (please specify below) (Clinical signs)-Clinical signs of toxicity-Neurological/Behavioral-Brain weight-Hepatic/Liver-Liver weight-Renal/Kidney-Kidney weight-Thyroid-Thyroid weight-Immune/Hematological-Spleen and thymus weight-Nutritional/Metabolic-Body weight of dams; Medium	Grande et. al-2006 674171

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Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
The experimental protocol was approved by the Office for Work and Health Protection and Technical Safety of the State of Berlin in accordance with the German National Animal Protection Law (Tierschutzgesetz BGBI. I S. 1105, 1998). Rat-Wistar - [rat]-Female	Oral-Gavage-Duration: Short-term (>1-30 days)-1-F0 - gestation (GD6-to birth)-F0- lactation (birth-PND21) Pregnant dams were exposed to test substance from GD6-PND21	**POD: 5 mg/kg-bw/day (NOAEL) -Developmental: delays in pubertal onset in female offspring** n= 16 Dose= 0, n= 11 Dose= 0.015, n= 13 Dose= 0.045, n= 13 Dose= 0.135, n= 15 Dose= 0.405, n= 16 Dose= 1.215, n= 13 Dose= 5, n= 12 Dose= 15, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD6-to birth, F0- lactation, birth-PND21	See footnotes for full summary [5]	Study did not fully described preparation and storage conditions of DEHP.	Reproductive/Developmental-Ovary weightLitter size, sex ratio, pup weight, post implantation loss and number of viable pups were assessed.In offspring: clinical signs, were assessed; on PND1 brain and liver weights measured (1-2 females/litter); PND13, all female pups were examined for the number of nipples/areolas. On PND 22, measurement of anogenital distance (AGD) and brain and liver weights. Beginning on PND33, all remaining females were evaluated daily for vaginal opening. Body weights were measured on day of vaginal opening. Daily vaginal smears were assessed from the day of vaginal opening to detect first day of estrus.-Other (please specify below) (Clinical signs)-Clinical signs of toxicity-Neurological/Behavioral-Brain weight-Hepatic/Liver-Liver weight-Renal/Kidney-Kidney weight-Thyroid-Thyroid weight-Immune/Hematological-Spleen and thymus weight-Nutritional/Metabolic-Body weight of dams; Medium	Grande et. al-2006 674171

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Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
No guidelines were reported. The study was "conducted under a protocol approved by the National Health and Environmental Effects Research Laboratories Institutional Animal Care and Use Committee". Rat-Sprague-Dawley - [rat]-Female	Oral-Gavage-Duration: Short-term (>1-30 days)-1-F0 - gestation (GD 8-birth)-F0- lactation (to PND 17)-F1- premating Pregnant dams were exposed from GD 8 to PND 17. Male offspring were necropsied at 7 months of age	**POD: 33 mg/kg-bw/day (NOAEL) -decreased seminal vesicle weight** n= 13 Dose= 0, n= 13 Dose= 11, n= 14 Dose= 33, n= 14 Dose= 100, n= 13 Dose= 300, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 8- birth, F0- lactation, to PND 17, F1- premating	See footnotes for full summary [6]	Combining data from experiments with differing exposure durations may not be appropriate. The data (including histopathology) for individual blocks/cohorts was inadequately reported precluding the ability to analyze the results independently.	Reproductive/Development: Litter size, pup body weight, and anogenital distance (PND 2); number and location of areola/nipple on PND 13 (all males and females); age and weight of preputial separation (PPS); terminal body weight, body weight on PND 18, body weight gain; serum testosterone and estradiol levels; organ weight (liver, kidney, adrenals, glans penis, ventral prostate, seminal vesicle, levator ani-bulbocavernosus, Cowper's gland, epididymides, testes); whole epididymal sperm count, gross observation for malformations of reproductive organs and histopathology on testes and epididymides.; Medium	Gray et. al 2009 697475

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Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
No guidelines were reported. The study was "conducted under a protocol approved by the National Health and Environmental Effects Research Laboratories Institutional Animal Care and Use Committee". Rat-Sprague-Dawley - [rat]-Female	Oral-Gavage-Duration: Short-term (>1-30 days)-1-F0 - gestation (GD 8-birth)-F0- lactation (to PND 17)-F1- premating Pregnant dams were exposed from GD 8 to PND 17, pups were weaned and exposed from PND 18-PND 63-65.	**POD: 33 mg/kg-bw/day (NOAEL) -decreased seminal vesicle weight** n= 13 Dose= 0, n= 13 Dose= 11, n= 14 Dose= 33, n= 14 Dose= 100, n= 13 Dose= 300, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 8- birth, F0- lactation, to PND 17, F1- premating, from PND 18 to PND 63-65	See footnotes for full summary [7]	Combining data from experiments with differing exposure durations may not be appropriate. The data (including histopathology) for individual blocks/cohorts was inadequately reported precluding the ability to analyze the results independently.	Reproductive/Development Litter size, pup body weight, and anogenital distance (PND 2); number and location of areola/nipple on PND 13 (all males and females); age and weight of preputial separation (PPS); terminal body weight, body weight on PND 18, body weight gain; serum testosterone and estradiol levels; organ weight (liver, kidney, adrenals, glans penis, ventral prostate, seminal vesicle, levator ani-bulbocavernosus, Cowper's gland, epididymides, testes); whole epididymal sperm count, gross observation for malformations of reproductive organs and histopathology on testes and epididymides.; Medium	Gray et. al 2009 697475

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Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
No guidelines were reported. The study was "conducted under a protocol approved by the National Health and Environmental Effects Research Laboratories Institutional Animal Care and Use Committee". Rat-Sprague-Dawley - [rat]-Female	Oral-Gavage-Duration: Short-term (>1-30 days)-1-F0 - gestation (GD 8-birth)-F0- lactation (to PND 17)-F1- premating Pregnant dams were exposed from GD 8 to PND 17. Male offspring were necropsied at 7 months of age	**POD: 33 mg/kg-bw/day (NOAEL) -decreased seminal vesicle weight** n= 13 Dose= 0, n= 13 Dose= 11, n= 14 Dose= 33, n= 14 Dose= 100, n= 13 Dose= 300, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 8- birth, F0- lactation, to PND 17, F1- premating	See footnotes for full summary [8]	Combining data from experiments with differing exposure durations may not be appropriate. The data (including histopathology) for individual blocks/cohorts was inadequately reported precluding the ability to analyze the results independently.	Reproductive/Development Litter size, pup body weight, and anogenital distance (PND 2); number and location of areola/nipple on PND 13 (all males and females); age and weight of preputial separation (PPS); terminal body weight, body weight on PND 18, body weight gain; serum testosterone and estradiol levels; organ weight (liver, kidney, adrenals, glans penis, ventral prostate, seminal vesicle, levator ani-bulbocavernosus, Cowper's gland, epididymides, testes); whole epididymal sperm count, gross observation for malformations of reproductive organs and histopathology on testes and epididymides.; High	Gray et. al 2009 697475
No guidance/compliance documents stated. Rat-Long-Evans - [rat]-Male	Oral-Gavage-Duration: Short-term (>1-30 days)-11-day(s) 7 day(s) Animals were exposed daily for 7 days.	**POD: 10 mg/kg-bw/day (LOAEL) -Increased number of Leydig cells in the testis.** n= 6 Dose= 0, n= 6 Dose= 10, n= 6 Dose= 750, mg/kg-bw/day	See footnotes for full summary [9]	Test substance preparation and storage conditions were not reported. Outcome assessment methodologies for mortality, body weight, food consumption, and animal activity were not reported. Testes were fixed in Bouin's solution, which may lead to differential tubular shrinkage. Details on potential confounding factors from animal housing conditions were not reported.	Reproductive/Development Serum testosterone and luteinizing hormone concentrations, steroidogenic enzyme concentration/activity, Leydig cell number, testes histpathology, Leydig cell stage, mRNA concentrations of Leydig cell specific markers; Medium	Guo et. al 2013 2001148

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Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
No guidance/compliance documents stated. Rat-Long-Evans - [rat]-Male	Oral-Gavage-Duration: Short-term (>1-30 days)- 11-day(s) 11 day(s) Male rats were treated daily for 7 days., followed by i.p. injection of EDS, then 4 more days of exposure to the test substance.	**POD: 10 mg/kg-bw/day (LOAEL) -Increased number of Leydig cells in the testis.** n= 6 Dose= 0, n= 6 Dose= 10, n= 6 Dose= 750, mg/kg-bw/day	See footnotes for full summary [10]	Test substance preparation and storage conditions were not reported. Outcome assessment methodologies for mortality, body weight, food consumption, and animal activity were not reported. Testes were fixed in Bouin's solution, which may lead to differential tubular shrinkage. Details on potential confounding factors from animal housing conditions were not reported.	Reproductive/Development- Serum testosterone and luteinizing hormone concentrations, steroidogenic enzyme concentration/activity, Leydig cell number, testes histpathology, Leydig cell stage, mRNA concentrations of Leydig cell specific markers; Medium	Guo et. al 2013 2001148
No guidance/compliance documents stated. Rat-Long-Evans - [rat]-Male	Oral-Gavage-Duration: Short-term (>1-30 days)- 11-day(s) 7 day(s) Animals were exposed daily for 7 days.	**POD: 10 mg/kg-bw/day (LOAEL) -Increased number of Leydig cells in the testis.** n= 6 Dose= 0, n= 6 Dose= 10, n= 6 Dose= 750, mg/kg-bw/day	See footnotes for full summary [11]	Test substance preparation and storage conditions were not reported. Outcome assessment methodologies for mortality, body weight, food consumption, and animal activity were not reported. Testes were fixed in Bouin's solution, which may lead to differential tubular shrinkage. Details on potential confounding factors from animal housing conditions were not reported.	Reproductive/Development- Serum testosterone and luteinizing hormone concentrations, steroidogenic enzyme concentration/activity, Leydig cell number, testes histpathology, Leydig cell stage, mRNA concentrations of Leydig cell specific markers; Medium	Guo et. al 2013 2001148

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Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
Adherence to a guideline was not specified. Mouse-A/J - [mouse]-Male	Oral-Diet-Duration: Sub-chronic (>30-90 days)-7-8-week(s) 7 days/week 2 week(s) 2 week exposure	**POD: 0.01 % (in water or food) (LOAEL) -Significantly increased Sertoli cell vacuolation, increased lymphocyte infiltration in the testes, and increased permeability of blood-testes barrier. Macrophage and MHC-II cells were also increased in the testes along with increased mRNA expression of cytokines (IFN-γ and IL-10).** n= 15 Dose= 0, n= 15 Dose= 0.01, n= 15 Dose= 0.1, % (in water or food)	See footnotes for full summary [12]	Major limitations included a lack of detail on the test substance and uncertainty about which duration (i.e., 2, 4, or 8 weeks) the presented body weights and testis weights were measured from. In addition, body weights were not measured throughout the course of the experiment and, thus, could not be used to independently verify the daily dose per animal.	Reproductive/Developmental-Absolute testis weight, Histological analyses of testes: degree of spermatogenic disturbance (Johnsen's score), numbers of seminiferous tubules with vacuoles in the cytoplasm of Sertoli cells; determination of the permeability of the blood-testis-barrier ((horseradish peroxidase detection)-Immune/Hematological-Lymphocyte infiltration into testicular interstium; Immunohistochemistry for T-cells (CD3), B-cells (CD45R/B220), macrophages (F4/80), MHC-II, IFNγ, and IL-10; mRNA expression of cytokines (IFNγ, TNFα, IL-6, and IL-10) in the testis; Medium	Kitaoka et. al-2013 2000828

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Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
Adherence to a guideline was not specified. Mouse-A/J - [mouse]-Male	Oral-Diet-Duration: Sub-chronic (>30-90 days)-7-8-week(s) 7 days/week 4 week(s) 4 week exposure	**POD: 0.01 % (in water or food) (LOAEL) -Significantly increased Sertoli cell vacuolation, increased lymphocyte infiltration in the testes, and increased permeability of blood-testes barrier. Macrophage and MHC-II cells were also increased in the testes along with increased mRNA expression of cytokines (IFN-γ and IL-10).** n= 15 Dose= 0, n= 15 Dose= 0.01, n= 15 Dose= 0.1, % (in water or food)	See footnotes for full summary [13]	Major limitations included a lack of detail on the test substance and uncertainty about which duration (i.e., 2, 4, or 8 weeks) the presented body weights and testis weights were measured from. In addition, body weights were not measured throughout the course of the experiment and, thus, could not be used to independently verify the daily dose per animal.	Reproductive/Developmental-Absolute testis weight, Histological analyses of testes: degree of spermatogenic disturbance (Johnsen's score), numbers of seminiferous tubules with vacuoles in the cytoplasm of Sertoli cells; determination of the permeability of the blood-testis-barrier ((horseradish peroxidase detection)-Immune/Hematological-Lymphocyte infiltration into testicular interstium; Immunohistochemistry for T-cells (CD3), B-cells (CD45R/B220), macrophages (F4/80), MHC-II, IFNγ, and IL-10; mRNA expression of cytokines (IFNγ, TNFα, IL-6, and IL-10) in the testis; Medium	Kitaoka et. al-2013 2000828

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Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
OECD protocol for detecting endocrine disruptors (OECD, 2001). Rat-Sprague-Dawley - [rat]-Male	Oral-Gavage-Duration: Short-term (>1-30 days)-7-10-day(s) 7 days/week 10 day(s) Animals were treated for 10 days	**POD: mg/kg-bw/day (Dichotomous (P/N)) -Positive in Hershberger assay at 500 mg/kg/day** n= 6 Dose= 0, n= 6 Dose= 20, n= 6 Dose= 100, n= 6 Dose= 500, mg/kg-bw/day	Hershberger assay was performed in castrated Sprague-Dawley male rats. One week after surgery, animals were administered 0, 20, 100 or 500 mg/kg/day of di-isodecyl phthalate (DIDP) in corn oil via oral gavage along with 0.4 mg/kg/day testosterone propionate delivered subcutaneously for 10 days. Endpoints evaluated included lethality, clinical signs, body weight, serum testosterone and luteinizing hormone, organ weights (liver, kidneys, adrenal gland, testes, glans penis, ventral prostates, combined seminal vesicles and coagulating glands, levator ani/bulbocavernosus [LABC], and Cowper's glands).All animals survived the entirety of the experiment. No clinical signs of toxicity were seen. No significant differences in terminal body weights were seen compared to control. Significant increases in serum LH ~33% occurred at 100 and 500 mg/kg/day and significant decreases in testosterone (~27%) was seen in all dose groups compared to testosterone alone control. Absolute liver weight was significantly increased at 500 mg/kg/day (17%) compared to testosterone alone. At 500 mg/kg/day, significant decreases in absolute seminal vesicles weight (9%) and ventral prostate weight (21%) compared to testosterone alone. No significant differences in LAB, Cowper's glands or glans penis weight were seen compared to testosterone alone. A reduction in the weight of two out of the five androgen-dependent tissues occurred at 500 mg/kg/day, indicating a positive response.A positive control group for antiandrogenic effects (treated with flutamide) was included and gave expected results (data not shown).	No major limitation.	Nutritional/Metabolic-Body weight-Other (please specify below) (Clinical signs)-Clinical signs-Hepatic/Liver-Liver weight-Renal/Kidney-Kidney weight-Other (please specify below) (Endocrine)-Adrenal weight-Reproductive/Developmental-The following 5 tissues were weighed: testes, ventral prostates, combined seminal vesicles and coagulating glands, levator ani/bulbocavernosus (LABC), and Cowper's gland.Serum testosterone and luteinizing hormone; Medium	Lee et. al 2007 673292

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Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
OECD protocol for detecting endocrine disruptors (OECD, 2001). Rat-Sprague-Dawley - [rat]-Male	Oral-Gavage-Duration: Short-term (>1-30 days)-7-10-day(s) 7 days/week 10 day(s) Animals were treated for 10 days	**POD: mg/kg-bw/day (Dichotomous (P/N)) -Positive in Hershberger assay at 500 mg/kg/day** n= 6 Dose= 0, n= 6 Dose= 20, n= 6 Dose= 100, n= 6 Dose= 500, mg/kg-bw/day	Hershberger assay was performed in castrated Sprague-Dawley male rats. One week after surgery, animals were administered 0, 20, 100 or 500 mg/kg/day of di-isodecyl phthalate (DIDP) in corn oil via oral gavage along with 0.4 mg/kg/day testosterone propionate delivered subcutaneously for 10 days. Endpoints evaluated included lethality, clinical signs, body weight, serum testosterone and luteinizing hormone, organ weights (liver, kidneys, adrenal gland, testes, glans penis, ventral prostates, combined seminal vesicles and coagulating glands, levator ani/bulbocavernosus [LABC], and Cowper's glands).All animals survived the entirety of the experiment. No clinical signs of toxicity were seen. No significant differences in terminal body weights were seen compared to control. Significant increases in serum LH ~33% occurred at 100 and 500 mg/kg/day and significant decreases in testosterone (~27%) was seen in all dose groups compared to testosterone alone control. Absolute liver weight was significantly increased at 500 mg/kg/day (17%) compared to testosterone alone. At 500 mg/kg/day, significant decreases in absolute seminal vesicles weight (9%) and ventral prostate weight (21%) compared to testosterone alone. No significant differences in LAB, Cowper's glands or glans penis weight were seen compared to testosterone alone. A reduction in the weight of two out of the five androgen-dependent tissues occurred at 500 mg/kg/day, indicating a positive response.A positive control group for antiandrogenic effects (treated with flutamide) was included and gave expected results (data not shown).	No major limitation.	Nutritional/Metabolic-Body weight-Other (please specify below) (Clinical signs)-Clinical signs-Hepatic/Liver-Liver weight-Renal/Kidney-Kidney weight-Other (please specify below) (Endocrine)-Adrenal weight-Reproductive/Developmental-The following 5 tissues were weighed: testes, ventral prostates, combined seminal vesicles and coagulating glands, levator ani/bulbocavernosus (LABC), and Cowper's gland.Serum testosterone and luteinizing hormone; Medium	Lee et. al 2007 673292

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Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
Non-guideline study, GLP not specified. The study referenced the Female Pubertal Protocol on the influence of prepubertal exposure to endocrine-disruptingchemicals reviewed by Goldman et al. (2000) Rat-Other (Wistar-Imamichi)-Female	Inhalation-Vapor-Duration: Short-term (>1-30 days) Rats were exposed as weanlings 6 hrs/day 5 day/week from PND 22 to presumably PND42 (day of sacrifice)	**POD: 5.21 mg/m^3 (LOAEC) -Reduced age at time of vaginal opening and first estrous** n= 12 Dose= 0, n= 12 Dose= 5.21, n= 12 Dose= 22.72, mg/m^3	See footnotes for full summary [14]	This study has some reporting deficiencies, namely in exposure method details (exposure apparatus, atmosphere generation, location of air sampling), and also in clearly defining the controls (if they were concurrent and air only). The study authors identified a few limitations. The protocol referenced specified daily exposures from PND 22 through PND 42. In this study, animals were only exposed 6hrs/day 5 days/week due to the limited availability of the inhalation device. The authors also noted that pituitary samples were not collected even though they have evidence suggesting possible DEHP pituitary effects. Finally, they indicated that analysis of tissue distribution of DEHP and its metabolites was not conducted because they did not use a physiologically based pharmacokinetic model.	Reproductive/Development Serum hormones (FSH, LH, testosterone, estradiol); gene expression in ovaries (real-time RT-PCR), estrous cyclicity, ovary and uterus organ weights, day of vaginal opening; Medium	Ma et. al 2006 674395
Non-guideline study, GLP not specified. The study referenced the Female Pubertal Protocol on the influence of prepubertal exposure to endocrine-disruptingchemicals reviewed by Goldman et al. (2000) Rat-Other (Wistar-Imamichi)-Female	Inhalation-Vapor-Duration: Short-term (>1-30 days) Rats were exposed as weanlings 6 hrs/day 5 day/week from PND 22 to presumably PND42 (day of sacrifice)	**POD: 5.21 mg/m^3 (LOAEC) -Reduced age at time of vaginal opening and first estrous** n= 12 Dose= 0, n= 12 Dose= 5.21, n= 12 Dose= 22.72, mg/m^3	See footnotes for full summary [15]	This study has some reporting deficiencies, namely in exposure method details (exposure apparatus, atmosphere generation, location of air sampling), and also in clearly defining the controls (if they were concurrent and air only). The study authors identified a few limitations. The protocol referenced specified daily exposures from PND 22 through PND 42. In this study, animals were only exposed 6hrs/day 5 days/week due to the limited availability of the inhalation device. The authors also noted that pituitary samples were not collected even though they have evidence suggesting possible DEHP pituitary effects. Finally, they indicated that analysis of tissue distribution of DEHP and its metabolites was not conducted because they did not use a physiologically based pharmacokinetic model.	Reproductive/Development Serum hormones (FSH, LH, testosterone, estradiol); gene expression in ovaries (real-time RT-PCR), estrous cyclicity, ovary and uterus organ weights, day of vaginal opening; Medium	Ma et. al 2006 674395

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Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
Adherence to a guideline was not specified. Rat-Sprague-Dawley - [rat]-Male	Oral-Gavage-Duration: Short-term (>1-30 days)-7-15-day(s) 7 days/week 15 day(s) Animals were gavaged from postnatal day (PND) 21 to 35.	**POD: 10 mg/kg-bw/day (LOAEL) -Significantly decreased absolute prostate weight, and circulating testosterone levels; histopathological changes** n= 4 Dose= 0, n= 4 Dose= 10, n= 4 Dose= 100, n= 4 Dose= 500, mg/kg-bw/day	See footnotes for full summary [16]	Major limitations include limited reporting (missing starting body weight, general animal husbandry conditions, and test substance purity), lack of detail on test substance characterization, missing results for some endpoints, small sample size, uncertainty surrounding the number of animals used for gene expression and histological analyses, and conflicting data presented for anogenital distance.	Reproductive/Development: Organ weights (testis, epididymis, prostate, seminal vesicle); anogenital distance; circulating testosterone and luteinizing hormone levels; histological analysis (testes); gene expression in testes (37,317 genes by cDNA microarray; StAR, Cyp11a1, HSD3b1, CaBP1, Vav2, Plcd1, Lhx1, and Isoc1 expression by RT-PCR); Uninformative	Vo et. al 2009 697420
Adherence to a guideline was not specified. Rat-Sprague-Dawley - [rat]-Male	Oral-Gavage-Duration: Short-term (>1-30 days)-7-15-day(s) 7 days/week 15 day(s) Animals were gavaged from postnatal day (PND) 21 to 35.	**POD: 10 mg/kg-bw/day (LOAEL) -Significantly decreased absolute prostate weight, and circulating testosterone levels; histopathological changes** n= 4 Dose= 0, n= 4 Dose= 10, n= 4 Dose= 100, n= 4 Dose= 500, mg/kg-bw/day	See footnotes for full summary [17]	Major limitations include limited reporting (missing starting body weight, general animal husbandry conditions, and test substance purity), lack of detail on test substance characterization, missing results for some endpoints, small sample size, uncertainty surrounding the number of animals used for gene expression and histological analyses, and conflicting data presented for anogenital distance.	Reproductive/Development: Organ weights (testis, epididymis, prostate, seminal vesicle); anogenital distance; circulating testosterone and luteinizing hormone levels; histological analysis (testes); gene expression in testes (37,317 genes by cDNA microarray; StAR, Cyp11a1, HSD3b1, CaBP1, Vav2, Plcd1, Lhx1, and Isoc1 expression by RT-PCR); Low	Vo et. al 2009 697420

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Diethylhexyl Phthalate- Parent compound - Short-term (>1-30 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
Adherence to a guideline was not specified. Rat-Sprague-Dawley - [rat]-Male	Oral-Gavage-Duration: Short-term (>1-30 days)-7-15-day(s) 7 days/week 15 day(s) Animals were gavaged from postnatal day (PND) 21 to 35.	**POD: 10 mg/kg-bw/day (LOAEL) -Significantly decreased absolute prostate weight, and circulating testosterone levels; histopathological changes** n= 4 Dose= 0, n= 4 Dose= 10, n= 4 Dose= 100, n= 4 Dose= 500, mg/kg-bw/day	See footnotes for full summary [18]	Major limitations include limited reporting (missing starting body weight, general animal husbandry conditions, and test substance purity), lack of detail on test substance characterization, missing results for some endpoints, small sample size, uncertainty surrounding the number of animals used for gene expression and histological analyses, and conflicting data presented for anogenital distance.	Reproductive/Development Organ weights (testis, epididymis, prostate, seminal vesicle); anogenital distance; circulating testosterone and luteinizing hormone levels; histological analysis (testes); gene expression in testes (37,317 genes by cDNA microarray; StAR, Cyp11a1, HSD3b1, CaBP1, Vav2, Plcd1, Lhx1, and Isoc1 expression by RT-PCR); Medium	Vo et. al 2009 697420

* Overall Quality Determination

[1] 63436: The reproductive toxicity of DEHP) was evaluated in male SD rats at ages 6, 14, 21, 42, and 86 days. Rats (N=7-10 per dose group) were administered 0 (corn oil vehicle), 10, 100, 1,000, or 2,000 mg/kg-day DEHP by oral gavage for 5 consecutive days. An additional group of animals was sacrificed prior to each experiment to determine the morphological state of development at the start of exposure. Animals were sacrificed 24 hours after the final dose. Evaluated outcomes include: absolute and relative testis weight, testicular zinc concentrations, testicular pathology. Several recovery experiments were also conducted and are described further below.Absolute testis weight was significantly reduced at 1000 mg/kg/day for rats aged 6-10 and 14-18 days during dosing, at 100 and 1000 mg/kg/day for rats aged 21-25 days during dosing, at 1000 and 2000 mg/kg/day for rats aged 42-26 days during dosing, and at 2000 mg/kg/day for rats 86-90 days during dosing. Similar results were obtained for effects on relative testes weight. Testis weight could not be evaluated in the 2000 mg/kg/day group for rats aged 6-10, 14-18, and 21-25 days during dosing since this dose was fatal. Testicular zinc concentrations were significantly reduced only in rats aged 86-90 days during aging at 1000 and 2000 mg/kg/day. Testicular pathology was described in the text and representative images were provided. For rats 6-10 days of age, a reduction in tubular size was observed and Sertoli cell nuclei per tubule was reduced by 35% at 1000 mg/kg/day. Rats 14-18 and 21-25 days of age showed losses of spermatocytes, but not of Sertoli cells at 1000 mg/kg/day. Rats 42-26 and 86-90 days of age showed loss of both spermatids and spermatocytes at 1000 and 2000 mg/kg/day.In a recovery study, 6-day-old male rats were gavaged with doses of 0, 100, 200, 500, or 1,000 mg/kg-day for five daily doses and allowed to recover for 4 weeks. After the 4-week recovery, body weight was reduced ~8% for rats in the 200 mg/kg/day group (but not at higher doses), absolute testis weight was reduced at 200, 500, and 1000 mg/kg/day, relative testis weight was reduced at 1000 mg/kg/day, and absolute epididymal weight was unaffected. Histological examination of the testes showed a dose-related decreased in maturation of spermatids in tubules at 500 and 1000 mg/kg/day, however, the number of Sertoli cell nuclei per tubule was unaffected.In a second recovery experiment, 6-day old male rats were gavaged with doses of 0, 200, 500, and 1000 mg/kg for 5 consecutive days. Twenty-four hours after the final dose, body weight was significantly reduced in rats at 1000 mg/kg-day, while relative testis weight and the number of Sertoli cell nuclei per tubule were reduced at 500 and 1000 mg/kg/day. Treated males were then mated with untreated females at 8, 10, 11, 12, or 15 weeks of age. Treatment with DEHP had no effect on fertility, the mean number of uterine implants, the mean number of live fetuses per pregnant female, resorptions, pre-implantation loss or the number of corpora lutea in the ovaries. Mated males were sacrificed at 11, 12, 13, 16, 19, and 23 weeks of age. No significant effects on body weight or absolute epididymis weight were reported at any interval. Absolute testis weight was significantly reduced 12% in males of the 1000 mg/kg/day group at week 13 and at all dose levels at week 19, but not at 11, 12, 16, or 23 weeks of age. The number of testicular spermatid heads was reduced at all DEHP dose levels in 13-week old males and at 1000 mg/kg/day in 19-week old males. Histologic examination of testes from control and high-dose males at ages 11-16 weeks did not reveal any treatment related abnormalities.Study authors did not identify a study NOAEL or LOAEL. A NOAEL of 10 mg/kg/day was identified based on reduced absolute testis weight in male rats exposed to DEHP at 21-25 days of age.

[2] 674162: Prepubertal Long-Evans male rats (presumed 10/group) were dosed with 0, 10, 500, or 750 mg/kg/day of DEHP in corn oil, via gavage, from post-natal day (PND) 21 to 48 (28 days). Body weight and timing of preputial separation were recorded during exposure. Animals were sacrificed on PND 49. Serum levels of luteinizing hormone and testosterone, and organ weights (testes, seminal vesicle and prostate) were determined. mRNA levels of pituitary LH β subunit and androgen receptor (Ar) were determined. The experiment was repeated with another set of presumably 10 male pups/group. Data for the two experiments were combined. In total data were presented for n = 38 (control), n = 19 (10 and 500 mg/kg/day) and n = 25 (750 mg/kg/day) indicating that more than 10/group/experiment were used at least for the control and high dose groups. Terminal body weights were significantly increased (8%) at 10 mg/kg/day and significantly decreased at 750 mg/kg/day (13%) compared to control; no significant difference was seen at 500 mg/kg/day. Timing of preputial separation was significantly decreased at 10 mg/kg/day (39.7 days) and increased at 750 mg/kg/day (46.3 days) compared to control (41.5 days); no difference was seen at 500 mg/kg/day (40.8 days). Mean body weights on the day of preputial separation were significantly increased in the 750 mg/kg/day group (11%) compared to controls but not at 10 or 500 mg/kg/day. Serum testosterone levels were significantly increased (58%) at 10 mg/kg/day and significantly decreased (40%) at 750 mg/kg/day compared with control. No significant differences in serum LH levels were seen at any dose level compared to control.Significant decreases in absolute testes weight (29%) and prostate weight (45%) were seen at 750 mg/kg/day compared to control. Absolute seminal vesicle weight was significantly increased (27%) at 10 mg/kg/day compared to control; and not determined in the 750 mg/kg/day group (reasoning not explained). No significant changes in organ weights were seen in the 500 mg/kg/day group. mRNA levels of LH β subunit and Ar were not significantly different from control. This along with the lack of changes in serum LH levels suggest the changes in testosterone levels were not mediated by the pituitary gland secretion of LH. The study authors did not report a POD. A LOAEL of 10 mg/kg/day was determined for this review based on earlier preputial separation, and increased serum testosterone and seminal vesicle weight. The responses observed were non-monotonic, which are not unusual for phthalate exposure.

[3] 674171: Eleven dose groups were studied with varying number of dams. The following doses of DEHP were studied, with number of dams in parentheses. 0 mg/kg/day (n=16); 0.015 mg/kg/day (n=11); 0.045 mg/kg/day (n=13); 0.135 mg/kg/day (n=13); 0.405 mg/kg/day (n=15); 1.215 mg/kg/day (n=16); 5 mg/kg/day (n=13); 15 mg/kg/day (n=12); 45 mg/kg/day (n=11); 135 mg/kg/day (n=14); 405 mg/kg/day (n=12).Female Wistar rats (11-16/group) were mated with males (2:1 ratio) for 3 hours at a time. The day sperm was detected via vaginal smear was considered day 0 of gestation (GD0). Presumed pregnant dams were administered 0, 0.015, 0.045, 0.135, 0.405, 1.215, 5, 15, 45, 135 or 405 mg/kg/day of DEHP in peanut oil via gavage from GD6 to post-natal day 21 (PND21). Dams were sacrificed on PND22 and pups were weaned. Dams and pups were evaluated daily for clinical signs. Maternal body weights and litter weights were measured daily. When dams were sacrificed the following organs were weighed: brain, liver, kidney, spleen, thymus, thyroid, and ovaries. Litter size, sex ratio, pup weight, post-implantation loss and number of viable pups were assessed. One or two female pups/litter were randomly selected and necropsied on PND1 and brain and livers were weighed. On PND13, all female pups were examined for the number of nipples/areolas. On PND 22, one to three female pups/litter were randomly selected for measurement of anogenital distance (AGD) and necropsied (brain and liver weighed). Beginning on PND33, all remaining females were evaluated daily for vaginal opening. Body weights were measured on day of vaginal opening. Daily vaginal smears were assessed from the day of vaginal opening to detect first day of estrus. No clinical signs of toxicity were observed in dams or offspring compared to control. No significant differences in prenatal or postnatal body weight gains were seen in dams compared to control. No difference in litter size, sex ratio, post-implantation losses, number of viable pups, pup birth weight or weaning weight were seen compared to control. In dams, no significant difference in brain, spleen, thymus, ovary, or thyroid weights were seen. A significant increase in absolute liver (12%) and kidney (7%) weights were seen in the 405 mg/kg/day group, compared to control. In females pups examined on PND1 (n=16-26/group; 1-2/litter), body weights were significantly increased at 0.045 mg/kg/day (12%), 1.215 mg/kg/day (15%), and 5 mg/kg/day (12%); absolute liver weights were significantly increased at 135 mg/kg/group (17%) and 405 mg/kg/day (17%); and no significant difference in absolute brain weights were seen compared to control. No significant difference in the number of nipples/areolas were seen at PND13 compared to control. On PND22, no significant difference in body weight, absolute liver and brain weights, or AGD were seen compared to control. A significant delay in the mean age of vaginal opening was seen at 15 mg/kg/day (1.8 days), 45 mg/kg/day (1.5 days), 135 mg/kg/day (2.5 days), and 405 mg/kg/day (2.2 days) compared to control. The body weights on day of vaginal opening were significantly increased at 1.215 mg/kg/day (10%) and 135 mg/kg/day (17%) compared to control, but not in the other groups. The age at first estrus was not significantly different from control, although body weights at first estrus were significantly increased at 1.215 mg/kg/day (9%), 5 mg/kg/day (10%), 135 mg/kg/day (14%), and 405 mg/kg/day (8%) compared to control.

[4] 674171: Eleven dose groups were studied with varying number of dams. The following doses of DEHP were studied, with number of dams in parentheses. 0 mg/kg/day (n=16); 0.015 mg/kg/day (n=11); 0.045 mg/kg/day (n=13); 0.135 mg/kg/day (n=13); 0.405 mg/kg/day (n=15); 1.215 mg/kg/day (n=16); 5 mg/kg/day (n=13); 15 mg/kg/day (n=12); 45 mg/kg/day (n=11); 135 mg/kg/day (n=14); 405 mg/kg/day (n=12).Female Wistar rats (11-16/group) were mated with males (2:1 ratio) for 3 hours at a time. The day sperm was detected via vaginal smear was considered day 0 of gestation (GD0). Presumed pregnant dams were administered 0, 0.015, 0.045, 0.135, 0.405, 1.215, 5, 15, 45, 135 or 405 mg/kg/day of DEHP in peanut oil via gavage from GD6 to post-natal day 21 (PND21). Dams were sacrificed on PND22 and pups were weaned. Dams and pups were evaluated daily for clinical signs. Maternal body weights and litter weights were measured daily. When dams were sacrificed the following organs were weighed: brain, liver, kidney, spleen, thymus, thyroid, and ovaries. Litter size, sex ratio, pup weight, post-implantation loss and number of viable pups were assessed. One or two female pups/litter were randomly selected and necropsied on PND1 and brain and livers were weighed. On PND13, all female pups were examined for the number of nipples/areolas. On PND 22, one to three female pups/litter were randomly selected for measurement of anogenital distance (AGD) and necropsied (brain and liver weighed). Beginning on PND33, all remaining females were evaluated daily for vaginal opening. Body weights were measured on day of vaginal opening. Daily vaginal smears were assessed from the day of vaginal opening to detect first day of estrus. No clinical signs of toxicity were observed in dams or offspring compared to control. No significant differences in prenatal or postnatal body weight gains were seen in dams compared to control. No difference in litter size, sex ratio, post-implantation losses, number of viable pups, pup birth weight or weaning weight were seen compared to control. In dams, no significant difference in brain, spleen, thymus, ovary, or thyroid weights were seen. A significant increase in absolute liver (12%) and kidney (7%) weights were seen in the 405 mg/kg/day group, compared to control. In females pups examined on PND1 (n=16-26/group; 1-2/litter), body weights were significantly increased at 0.045 mg/kg/day (12%), 1.215 mg/kg/day (15%), and 5 mg/kg/day (12%); absolute liver weights were significantly increased at 135 mg/kg/group (17%) and 405 mg/kg/day (17%); and no significant difference in absolute brain weights were seen compared to control. No significant difference in the number of nipples/areolas were seen at PND13 compared to control. On PND22, no significant difference in body weight, absolute liver and brain weights, or AGD were seen compared to control. A significant delay in the mean age of vaginal opening was seen at 15 mg/kg/day (1.8 days), 45 mg/kg/day (1.5 days), 135 mg/kg/day (2.5 days), and 405 mg/kg/day (2.2 days) compared to control. The body weights on day of vaginal opening were significantly increased at 1.215 mg/kg/day (10%) and 135 mg/kg/day (17%) compared to control, but not in the other groups. The age at first estrus was not significantly different from control, although body weights at first estrus were significantly increased at 1.215 mg/kg/day (9%), 5 mg/kg/day (10%), 135 mg/kg/day (14%), and 405 mg/kg/day (8%) compared to control.

[5] 674171: Eleven dose groups were studied with varying number of dams. The following doses of DEHP were studied, with number of dams in parentheses. 0 mg/kg/day (n=16); 0.015 mg/kg/day (n=11); 0.045 mg/kg/day (n=13); 0.135 mg/kg/day (n=13); 0.405 mg/kg/day (n=15); 1.215 mg/kg/day (n=16); 5 mg/kg/day (n=13); 15 mg/kg/day (n=12); 45 mg/kg/day (n=11); 135 mg/kg/day (n=14); 405 mg/kg/day (n=12).Female Wistar rats (11-16/group) were mated with males (2:1 ratio) for 3 hours at a time. The day sperm was detected via vaginal smear was considered day 0 of gestation (GD0). Presumed pregnant dams were administered 0, 0.015, 0.045, 0.135, 0.405, 1.215, 5, 15, 45, 135 or 405 mg/kg/day of DEHP in peanut oil via gavage from GD6 to post-natal day 21 (PND21). Dams were sacrificed on PND22 and pups were weaned. Dams and pups were evaluated daily for clinical signs. Maternal body weights and litter weights were measured daily. When dams were sacrificed the following organs were weighed: brain, liver, kidney, spleen, thymus, thyroid, and ovaries. Litter size, sex ratio, pup weight, post-implantation loss and number of viable pups were assessed. One or two female pups/litter were randomly selected and necropsied on PND1 and brain and livers were weighed. On PND13, all female pups were examined for the number of nipples/areolas. On PND 22, one to three female pups/litter were randomly selected for measurement of anogenital distance (AGD) and necropsied (brain and liver weighed). Beginning on PND33, all remaining females were evaluated daily for vaginal opening. Body weights were measured on day of vaginal opening. Daily vaginal smears were assessed from the day of vaginal opening to detect first day

of estrus. No clinical signs of toxicity were observed in dams or offspring compared to control. No significant differences in prenatal or postnatal body weight gains were seen in dams compared to control. No difference in litter size, sex ratio, post-implantation losses, number of viable pups, pup birth weight or weaning weight were seen compared to control. In dams, no significant difference in brain, spleen, thymus, ovary, or thyroid weights were seen. A significant increase in absolute liver (12%) and kidney (7%) weights were seen in the 405 mg/kg/day group, compared to control. In females pups examined on PND1 (n=16-26/group; 1-2/litter), body weights were significantly increased at 0.045 mg/kg/day (12%), 1.215 mg/kg/day (15%), and 5 mg/kg/day (12%); absolute liver weights were significantly increased at 135 mg/kg/group (17%) and 405 mg/kg/day (17%); and no significant difference in absolute brain weights were seen compared to control. No significant difference in the number of nipples/areolas were seen at PND13 compared to control. On PND22, no significant difference in body weight, absolute liver and brain weights, or AGD were seen compared to control. A significant delay in the mean age of vaginal opening was seen at 15 mg/kg/day (1.8 days), 45 mg/kg/day (1.5 days), 135 mg/kg/day (2.5 days), and 405 mg/kg/day (2.2 days) compared to control. The body weights on day of vaginal opening were significantly increased at 1.215 mg/kg/day (10%) and 135 mg/kg/day (17%) compared to control, but not in the other groups. The age at first estrus was not significantly different from control, although body weights at first estrus were significantly increased at 1.215 mg/kg/day (9%), 5 mg/kg/day (10%), 135 mg/kg/day (14%), and 405 mg/kg/day (8%) compared to control.

[6] 697475: Timed-pregnant Sprague-Dawley rats (13-14/group) were dosed with 0, 11, 33, 100, or 300 mg/kg/day DEHP in corn oil, via gavage, from gestation day (GD) 8 until PND 17. Dams were separated into two blocks of animals; each block consisted of 6-7 pregnant females/group. The first block was further separated into two cohorts. In one cohort, 2-3 male offspring/litter (total of 16-20 pups/group) were further dosed from PND18 until necropsy at 63-65 days of age (referred to as the pubertal cohort [PUB]). The remaining male offspring in block 1 formed the second cohort; these males were not further dosed after maternal dosing ended at PND 17 and were sacrificed at 7 months of age (referred to as the in-utero-lactation [IUL1] cohort). In block 2, none of the male offspring were dosed after maternal dosing ended at PND 17. These block 2 male offspring were sacrificed at 7 months of age [IUL2] and in most cases, the data for these animals were combined with the IUL cohort in block 1. This Review is for the IUL1 and IUL2 results.. However, please note that the dam data and early litter data up to PND 13 when the separate blocks and cohorts were assigned are shared across the PUB cohort and IUL reviews. Additionally, in some instances, the study authors combined the data from both blocks (and cohorts) to conduct analysis. Since these data cannot be teased apart based on cohort (and thus exposure duration), those results are also shared across reviews. Dams were assessed for viability, clinical signs, body weight (GD8, GD22, at birth, and on lactation day 17), and pregnancy weight gain. Litter endpoints (blocks combined) included birthweights, anogenital distance (AGD), litter size, body weights of male and female offspring on PND 2, and number and location of areola/nipples on PND 13 (all males). The PUB cohort was then examined daily for preputial separation (PPS) from PND35 until complete separation. Age and body weight at PPS were noted. Other endpoints assessed (in both blocks and cohorts) included offspring male body weight on PND 18, body weight gain, terminal body weights, serum testosterone and estradiol levels, organ weights (liver, kidney, adrenals, glans penis, ventral prostate, seminal vesicle, levator ani-bulbocavernosus, Cowper's gland, epididymides, testes), whole epididymal sperm counts, gross observation for malformations of reproductive organs and histopathology on testes and epididymides.Dam and early litter results: The study reports, that maternal viability was similar between the groups, and no adverse effects were observed in exposed dams. Dam body weights were not significantly different on GD 8, GD 22, at birth, or PND 17 compared to control; similarly, body weight gain (GD 8-22) in treated dams was not significantly different from control. Litter size and pup viability were not significantly different from controls. On PND 2, female pup weights and AGD were not significantly different from control, whereas male pup body weights were significantly decreased (7%) and AGD was significantly decreased (16%) at 300 mg/kg/day, compared to controls. On PND 13 significant increases in the percentage of males with female-like areola/nipples (55% vs 11% in controls) and number of areolae per male (4-fold increase) were observed at 300 mg/kg/day. IUL-specific effects: Age of preputial separation was not significantly different from controls (data not shown). Terminal body weights were consistent across groups. No significant difference in serum testosterone or estradiol was seen (estradiol values not shown). Absolute seminal vesicle weights were significantly decreased (5% and 18%) at 100 and 300 mg/kg/day, respectively compared with controls. At 300 mg/kg/day, significant decreases in absolute weight of glans penis (9%), ventral prostate (13%), levator ani-bulbocavernosus (11%), Cowper's gland (18%), epididymis (17%), and kidney (10%) were observed. Absolute testes weight was significantly decreased (8%); only if analyzed without body weight as a covariate. No significant differences in adrenals or liver weights were seen compared to controls. The number of female-like nipples/male increased significantly from 0 in the control group to 1.22 at 300 mg/kg/day. Histological reproductive lesions occurred in 0/23, 3/25, 6/31, 5/25, and 17/23 males in the IUL1 cohort and in 0/40, 3/30, 4/36, 5/51, and 14/31 males in the IUL2 (block 2) from the 0, 11, 33, 100, and 300 mg/kg-day groups, respectively. Incidences for specific lesions were not provided, but in general, the malformations observed included testis and epididymal agenesis, fluid-filled, flaccid testes, epididymal granulomas, epididymal epithelial thickening, absent or malformed sex accessory and coagulating gland tissues, prostate pathology, retained nipples, atrophic seminiferous tubules, vacuolated Sertoli cells, minimal hemorrhagic testis, and elongated gubernacular ligament. Based on the data provided for the IUL1 and IUL2 groups, a developmental NOAEL of 33 mg/kg/day and a LOAEL of 100 mg/kg/day was determined for this review based on decreased seminal vesicle weight in male offspring. Combined data analysis: The authors conducted a power analysis and determined that there were insufficient animal numbers in the PUB or IUL cohorts alone (16-20 males/group) to attain sufficient statistical power to detect treatment-related histopathological lesions. Additionally, the authors were specifically interested in determining whether DEHP exposure caused "phthalate syndrome" in males exposed during development, and statistical power was also too low to detect this effect. Therefore, the authors combined the histological data for Block 1 (PUB + IUL cohorts) and then also the data from Block 1 (both cohorts) and Block 2. These combinations included data derived from different exposure durations, which may not be appropriate. It is unclear why the authors did not combine the IUL cohort from block 1 with the similarly treated animals from block 2, although this could potentially be done independently with the data provided. When block 1 and 2 incidence data were combined, the percentage of male offsprings showing reproductive lesions were 0, 11.3%, 11.6%, 12.9%, and 51.3% at 0, 11, 33, 100, and 300 mg/kg-day, respectively. The increase was statistically significant in all treatment groups. When specific lesions were assessed, the percentage of males showing malformed coagulating glands was significantly higher than controls at $\geq$100 mg/kg/day, and the percentage showing permanent nipples, gross testis, and epididymal abnormalities, and epididymal histopathology was significant at 300 mg/kg-day. The percentage of males showing testis histopathology was significant at 33.0 and 300 mg/kg/day, but not at 100 mg/kg/day. Combining the block 1 and 2 data allowed for phthalate Syndrome Analysis. A significant increase in the percentage of males displaying any phthalate Syndrome trait was observed at $\geq$ 11 mg/kg/day. Based on these analyses described, the study authors conclude that treatment-related effects (namely phthalate syndrome) were observed in all dose groups, suggesting a LOAEL of 11 mg/kg-day. It was noted that this was consistent with the NOAEL of 4.8 mg/kg-day set by NTP.

[7] 697475: Timed-pregnant Sprague-Dawley rats (13-14/group) were dosed with 0, 11, 33, 100, or 300 mg/kg/day DEHP in corn oil, via gavage, from gestation day (GD) 8 until PND 17. Dams were separated into two blocks of animals; each block consisted of 6-7 pregnant females/group. The first block was further separated into two cohorts. In one cohort, 2-3 male offspring/litter (total of 16-20 pups/group) were further dosed from PND18 until necropsy at 63-65 days of age (referred to as the pubertal cohort [PUB]). The remaining male offspring in block 1 formed the second cohort; these males were not further dosed after maternal dosing ended at PND 17 and were sacrificed at 7 months of age (referred to as the in-utero-lactation [IUL1] cohort). In block 2, none of the male offspring were dosed after maternal dosing ended at PND 17. These block 2 male offspring were sacrificed at 7 months of age [IUL2] and in most cases, the data for these animals were combined with the IUL cohort in block 1. This Review is for the IUL1 and IUL2 results.. However, please note that the dam data and early litter data up to PND 13 when the separate blocks and cohorts were assigned are shared across the PUB cohort and IUL reviews. Additionally, in some instances, the study authors combined the data from both blocks (and cohorts) to conduct analysis. Since these data cannot be teased apart based on cohort (and thus exposure duration), those results are also shared across reviews. Dams were assessed for viability, clinical signs, body weight (GD8, GD22, at birth, and on lactation day 17), and pregnancy weight gain. Litter endpoints (blocks combined) included birthweights, anogenital distance (AGD), litter size, body weights of male and female offspring on PND 2, and number and location of areola/nipples on PND 13 (all males). The PUB cohort was then examined daily for preputial separation (PPS) from PND35 until complete separation. Age and body weight at PPS were noted. Other endpoints assessed (in both blocks and cohorts) included offspring male body weight on PND 18, body weight gain, terminal body weights, serum testosterone and estradiol levels, organ weights (liver, kidney, adrenals, glans penis, ventral prostate, seminal vesicle, levator ani-bulbocavernosus, Cowper's gland, epididymides, testes), whole epididymal sperm counts, gross observation for malformations of reproductive

organs and histopathology on testes and epididymides.Dam and early litter results: The study reports, that maternal viability was similar between the groups, and no adverse effects were observed in exposed dams. Dam body weights were not significantly different on GD 8, GD 22, at birth, or PND 17 compared to control; similarly, body weight gain (GD 8-22) in treated dams was not significantly different from control. Litter size and pup viability were not significantly different from controls. On PND 2, female pup weights and AGD were not significantly different from control, whereas male pup body weights were significantly decreased (7%) and AGD was significantly decreased (16%) at 300 mg/kg/day, compared to controls. On PND 13 significant increases in the percentage of males with female-like areola/nipples (55% vs 11% in controls) and number of areolae per male (4-fold increase) were observed at 300 mg/kg/day. IUL-specific effects: Age of preputial separation was not significantly different from controls (data not shown). Terminal body weights were consistent across groups. No significant difference in serum testosterone or estradiol was seen (estradiol values not shown). Absolute seminal vesicle weights were significantly decreased (5% and 18%) at 100 and 300 mg/kg/day, respectively compared with controls. At 300 mg/kg/day, significant decreases in absolute weight of glans penis (9%), ventral prostate (13%), levator ani-bulbocavernosus (11%), Cowper's gland (18%), epididymis (17%), and kidney (10%) were observed. Absolute testes weight was significantly decreased (8%); only if analyzed without body weight as a covariate. No significant differences in adrenals or liver weights were seen compared to controls. The number of female-like nipples/male increased significantly from 0 in the control group to 1.22 at 300 mg/kg/day. Histological reproductive lesions occurred in 0/23, 3/25, 6/31, 5/25, and 17/23 males in the IUL1 cohort and in 0/40, 3/30, 4/36, 5/51, and 14/31 males in the IUL2 (block 2) from the 0, 11, 33, 100, and 300 mg/kg-day groups, respectively. Incidences for specific lesions were not provided, but in general, the malformations observed included testis and epididymal agenesis, fluid-filled, flaccid testes, epididymal granulomas, epididymal epithelial thickening, absent or malformed sex accessory and coagulating gland tissues, prostate pathology, retained nipples, atrophic seminiferous tubules, vacuolated Sertoli cells, minimal hemorrhagic testis, and elongated gubernacular ligament. Based on the data provided for the IUL1 and IUL2 groups, a developmental NOAEL of 33 mg/kg/day and a LOAEL of 100 mg/kg/day was determined for this review based on decreased seminal vesicle weight in male offspring. Combined data analysis: The authors conducted a power analysis and determined that there were insufficient animal numbers in the PUB or IUL cohorts alone (16-20 males/group) to attain sufficient statistical power to detect treatment-related histopathological lesions. Additionally, the authors were specifically interested in determining whether DEHP exposure caused "phthalate syndrome" in males exposed during development, and statistical power was also too low to detect this effect. Therefore, the authors combined the histological data for Block 1 (PUB + IUL cohorts) and then also the data from Block 1 (both cohorts) and Block 2. These combinations included data derived from different exposure durations, which may not be appropriate. It is unclear why the authors did not combine the IUL cohort from block 1 with the similarly treated animals from block 2, although this could potentially be done independently with the data provided. When block 1 and 2 incidence data were combined, the percentage of male offsprings showing reproductive lesions were 0, 11.3%, 11.6%, 12.9%, and 51.3% at 0, 11, 33, 100, and 300 mg/kg-day, respectively. The increase was statistically significant in all treatment groups. When specific lesions were assessed, the percentage of males showing malformed coagulating glands was significantly higher than controls at $\geq$100 mg/kg/day, and the percentage showing permanent nipples, gross testis, and epididymal abnormalities, and epididymal histopathology was significant at 300 mg/kg-day. The percentage of males showing testis histopathology was significant at 33.0 and 300 mg/kg/day, but not at 100 mg/kg/day. Combining the block 1 and 2 data allowed for phthalate Syndrome Analysis. A significant increase in the percentage of males displaying any phthalate Syndrome trait was observed at $\geq$ 11 mg/kg/day. Based on these analyses described, the study authors conclude that treatment-related effects (namely phthalate syndrome) were observed in all dose groups, suggesting a LOAEL of 11 mg/kg-day. It was noted that this was consistent with the NOAEL of 4.8 mg/kg-day set by NTP.

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[9] 2001148: In a male reproductive toxicity study, male Long-Evans rats (6/group) were exposed via oral gavage to DEHP (purity 99%) at concentrations of 0 (vehicle control), 10, or 750 mg/kg/day for 7 days. Following 7 days of treatment, an intraperitoneal (i.p.) injection of 75 mg/kg ethane dimethanesulfonate (EDS, a Leydig cell-specific eliminator) was administered to the animals. Animals were then treated with the vehicle control or DEHP at the same dose levels for an additional 4 days. Following this exposure period and immediately prior to euthanization, animals were treated with 40 µg/g-bw of a BrdU monoclonal antibody via i.p. injection to allow for labelling of dividing cells. Animals were observed for mortality, activity, food consumption, and body weight during the study. Male reproductive endpoints were evaluated including serum testosterone and luteinizing hormone (LH) concentrations, steroidogenic enzyme concentration/activity, Leydig cell number and stage, testes histopathology, and mRNA concentrations of Leydig cell specific numbers. No animals died during the study and all animals exhibited normal activity. No effects on food consumption or body weights were noted. On Day 4 following i.p. administration of EDS, serum and testis testosterone levels in the control group were undetectable, indicating all Leydig cells had been eliminated. Serum and testis testosterone levels in both treated groups were about 10% of normal serum and testis testosterone levels. Serum LH concentrations were comparable between the treated and control groups. Histopathology of the testis revealed increased numbers of Leydig cells in treated groups, the proliferative rate of interstitial cells was comparable between treated and control groups, and an absence of biomarkers for immature or adult Leydig cells. Increased expression concentrations of certain Leydig cell-specific markers (e.g., Lhcgr, Cyp11a1, Hsd3b1, and Cyp17a1) were present in treated groups. Other Leydig cell-specific markers that are expressed in immature and adult Leydig cells (e.g., Hsd11b1, Insl3, and Hsd17b3) were absent in both the control and treated groups. In addition, nestin (Nes) expression was significantly decreased in treated groups, Sertoli cell biomarker (Fshr) and spermatogonial stem cell biomarker (Kit) were comparable to controls, and the biomarker of proliferating cells (Pcna) was increased in treated and control groups in comparison to normal testis levels, but comparable between control and treated groups within the study. The author concluded that these findings together indicate the cells present in treated testes were not immature or adult Leydig cells, but possibly newly formed progenitor Leydig cells. Measurements for enzymatic activities of Leydig cell lineage enzymes indicated there were detectable enzymatic activities of 3β-HSD and CYP17A1 in treated groups that were not present in control groups. In contrast, there was a lack of detectable 17β-HSD activity in both control and treated groups, which the study author attributed to an absence of Leydig cells present at the advanced stage, since this enzyme begins to be expressed at immature stages of Leydig cells. The author-reported LOAEL was 10 mg/kg-bw/day, based on increased Leydig cell number in the testis.

[10] 2001148: In a male reproductive toxicity study, male Long-Evans rats (6/group) were exposed via oral gavage to DEHP (purity 99%) at concentrations of 0 (vehicle control), 10, or 750 mg/kg/day for 7 days. Following 7 days of treatment, an intraperitoneal (i.p.) injection of 75 mg/kg ethane dimethanesulfonate (EDS, a Leydig cell-specific eliminator) was administered to the animals. Animals were then treated with the vehicle control or DEHP at the same dose levels for an additional 4 days. Following this exposure period and immediately prior to euthanization, animals were treated with 40 µg/g-bw of a BrdU monoclonal antibody via i.p. injection to allow for labelling of dividing cells. Animals were observed for mortality, activity, food consumption, and body weight during the study. Male reproductive endpoints were evaluated including serum testosterone and luteinizing hormone (LH) concentrations, steroidogenic enzyme concentration/activity, Leydig cell number and stage, testes histopathology, and mRNA concentrations of Leydig cell specific numbers. No animals died during the study and all animals exhibited normal activity. No effects on food consumption or body weights were noted. On Day 4 following i.p. administration of EDS, serum and testis testosterone levels in the control group were undetectable, indicating all Leydig cells had been eliminated. Serum and testis testosterone levels in both treated groups were about 10% of normal serum and testis testosterone levels. Serum LH concentrations were comparable between the treated and control groups. Histopathology of the testis revealed increased numbers of Leydig cells in treated groups, the proliferative rate of interstitial cells was comparable between treated and control groups, and an absence of biomarkers for immature or adult Leydig cells. Increased expression concentrations of certain Leydig cell-specific markers (e.g., Lhcgr, Cyp11a1, Hsd3b1, and Cyp17a1) were present in treated groups. Other Leydig cell-specific markers that are expressed in immature and adult Leydig cells (e.g., Hsd11b1, Insl3, and Hsd17b3) were absent in both the control and treated groups. In addition, nestin (Nes) expression was significantly decreased in treated groups, Sertoli cell biomarker (Fshr) and spermatogonial stem cell biomarker (Kit) were comparable to controls, and the biomarker of proliferating cells (Pcna) was increased in treated and control groups in comparison to normal testis levels, but comparable between control and treated groups within the study. The author concluded that these findings together indicate the cells present in treated testes were not immature or adult Leydig cells, but possibly newly formed progenitor Leydig cells. Measurements for enzymatic activities of Leydig cell lineage enzymes indicated there were detectable enzymatic activities of 3β-HSD and CYP17A1 in treated groups that were not present in control groups. In contrast, there was a lack of detectable 17β-HSD activity in both control and treated groups, which the study author attributed to an absence of Leydig cells present at the advanced stage, since this enzyme begins to be expressed at immature stages of Leydig cells. The author-reported LOAEL was 10 mg/kg-bw/day, based on increased Leydig cell number in the testis.

[11] 2001148: In a male reproductive toxicity study, male Long-Evans rats (6/group) were exposed via oral gavage to DEHP (purity 99%) at concentrations of 0 (vehicle control), 10, or 750 mg/kg/day for 7 days. Following 7 days of treatment, an intraperitoneal (i.p.) injection of 75 mg/kg ethane dimethanesulfonate (EDS, a Leydig cell-specific eliminator) was administered to the animals. Animals were then treated with the vehicle control or DEHP at the same dose levels for an additional 4 days. Following this exposure period and immediately prior to euthanization, animals were treated with 40 µg/g-bw of a BrdU monoclonal antibody via i.p. injection to allow for labelling of dividing cells. Animals were observed for mortality, activity, food consumption, and body weight during the study. Male reproductive endpoints were evaluated including serum testosterone and luteinizing hormone (LH) concentrations, steroidogenic enzyme concentration/activity, Leydig cell number and stage, testes histopathology, and mRNA concentrations of Leydig cell specific numbers. No animals died during the study and all animals exhibited normal activity. No effects on food consumption or body weights were noted. On Day 4 following i.p. administration of EDS, serum and testis testosterone levels in the control group were undetectable, indicating all Leydig cells had been eliminated. Serum and testis testosterone levels in both treated groups were about 10% of normal serum and testis testosterone levels. Serum LH concentrations were comparable between the treated and control groups. Histopathology of the testis revealed increased numbers of Leydig cells in treated groups, the proliferative rate of interstitial cells was comparable between treated and control groups, and an absence of biomarkers for immature or adult Leydig cells. Increased expression concentrations of certain Leydig cell-specific markers (e.g., Lhcgr, Cyp11a1, Hsd3b1, and Cyp17a1) were present in treated groups. Other Leydig cell-specific markers that are expressed in immature and adult Leydig cells (e.g., Hsd11b1, Insl3, and Hsd17b3) were absent in both the control and treated groups. In addition, nestin (Nes) expression was significantly decreased in treated groups, Sertoli cell biomarker (Fshr) and spermatogonial stem cell biomarker (Kit) were comparable to controls, and the biomarker of proliferating cells (Pcna) was increased in treated and control groups in comparison to normal testis levels, but comparable between control and treated groups within the study. The author concluded that these findings together indicate the cells present in treated testes were not immature or adult Leydig cells, but possibly newly formed progenitor Leydig cells. Measurements for enzymatic activities of Leydig cell lineage enzymes indicated there were detectable enzymatic activities of 3β-HSD and CYP17A1 in treated groups that were not present in control groups. In contrast, there was a lack of detectable 17β-HSD activity in both control and treated groups, which the study author attributed to an absence of Leydig cells present at the advanced stage, since this enzyme begins to be expressed at immature stages of Leydig cells. The author-reported LOAEL was 10 mg/kg-bw/day, based on increased Leydig cell number in the testis.

[12] 2000828: In an oral toxicity study, 7-week-old male A/J mice received chow containing 0, 0.01%, or 0.1% of di-(2-ethylhexyl) phthalate (DEHP) for 8 weeks (15 mice/group). The study authors state that these concentrations of DEHP in chow equated to daily doses of 0.0113-0.0133 mg/g/day for 0.01% and 0.1152-0.1357 mg/g/day for 0.1%; it is unclear if this is based on food intake and body weights from this study. Food and water consumption were monitored by the study authors. At the end of the treatment period, the mice (10 mice/group) were weighed, euthanized, and their testes were removed and weighed. Histological samples were taken from the right

testis, whereas total RNA and immunohistological samples were taken from the left testis. The authors assessed multiple parameters by histology including degree of spermatogenic disturbance (Johnsen's score), Sertoli cell vacuolation, and the number of lymphocytes in the testicular interstitium. Immunohistochemistry for T-cells (CD3), B- cells (CD45R/B220), macrophages (F4/80), MHC-II, IFNγ and IL-10 was performed along with determining mRNA expression of cytokines (IFNγ, TNFα, IL-6, and IL-10) in the testis. The remaining five animals/group dosed with horseradish peroxidase (HRP; 10 mg/kg body weight i.p.) 30 minutes prior to euthanasia to evaluate the integrity of the blood-testis barrier (BTB) by histochemistry. This paper exposed mice for 2, 4 or 8 weeks (n=10/group/timepoint). The study reports data for body weight, food intake, water intake and testis weight however, the data was not separated out for each timepoint. For example, mean food intake was reported to be 4.84 $\pm$0.43, 4.72 $\pm$0.23, and 4.63 $\pm$ 0.36 at 0, 0.01% and 0.1%, respectively, it was not clear which animals were included in these calculations. Water intake was reported only to be approximately 7 ml/day for the three dose groups. The study shows a table reporting no significant difference in body weights or absolute testis weights from control, however it cannot be determined which duration these data came from. From histopathological analysis of the testes, it was noted that spermatogenic disturbance was present in the 0.1% group (Johnsen's score was significantly decreased compared to control). A dose-dependent increase in Sertoli cell vacuolation was observed at 0.01 % (16.7-fold) and 0.1% (18.9-fold) compared to control. The number of lymphocytes in 1 mm2 the testicular interstitium was significantly increased at 0.01% (19.2) and 0.1% (22.6) compared to control (0). A significant increase in F4/80+ macrophages (~2-fold) and MHC-II+ cells (~1-fold) were seen at both 0.01% and 0.1% compared to control. Real-time RT-PCR analysis of RNA extracted from the testes indicated that there was a significant ~4-fold increase in IFN-γ expression and ~2.5-fold increase in IL-10 expression in both DEHP-exposed groups as compared to the control group. There was no treatment-related change in testicular mRNA expression of TNF-α or IL-6. As opposed to the negative result for the control group, HRP stain was detected inside the lumen of a few seminiferous tubules beyond the BTB in both 0.01% or 0.1% DEHP. No author-reported toxicity values were provided. Based on the data presented in the study, a LOAEL of 0.01% DEHP in chow was identified based on significantly increased Sertoli cell vacuolation, increased lymphocyte infiltration in the testes, and increased permeability of blood-testes barrier. Macrophage and MHC-II cells were also increased in the testes along with increased mRNA expression of cytokines (IFN-γ and IL-10).

[13] 2000828: In an oral toxicity study, 7-week-old male A/J mice received chow containing 0, 0.01%, or 0.1% of di-(2-ethylhexyl) phthalate (DEHP) for 8 weeks (15 mice/group). The study authors state that these concentrations of DEHP in chow equated to daily doses of 0.0113-0.0133 mg/g/day for 0.01% and 0.1152-0.1357 mg/g/day for 0.1%; it is unclear if this is based on food intake and body weights from this study. Food and water consumption were monitored by the study authors. At the end of the treatment period, the mice (10 mice/group) were weighed, euthanized, and their testes were removed and weighed. Histological samples were taken from the right testis, whereas total RNA and immunohistological samples were taken from the left testis. The authors assessed multiple parameters by histology including degree of spermatogenic disturbance (Johnsen's score), Sertoli cell vacuolation, and the number of lymphocytes in the testicular interstitium. Immunohistochemistry for T-cells (CD3), B- cells (CD45R/B220), macrophages (F4/80), MHC-II, IFNγ and IL-10 was performed along with determining mRNA expression of cytokines (IFNγ, TNFα, IL-6, and IL-10) in the testis. The remaining five animals/group dosed with horseradish peroxidase (HRP; 10 mg/kg body weight i.p.) 30 minutes prior to euthanasia to evaluate the integrity of the blood-testis barrier (BTB) by histochemistry. This paper exposed mice for 2, 4 or 8 weeks (n=10/group/timepoint). The study reports data for body weight, food intake, water intake and testis weight however, the data was not separated out for each timepoint. For example, mean food intake was reported to be 4.84 $\pm$0.43, 4.72 $\pm$0.23, and 4.63 $\pm$ 0.36 at 0, 0.01% and 0.1%, respectively, it was not clear which animals were included in these calculations. Water intake was reported only to be approximately 7 ml/day for the three dose groups. The study shows a table reporting no significant difference in body weights or absolute testis weights from control, however it cannot be determined which duration these data came from. From histopathological analysis of the testes, it was noted that spermatogenic disturbance was present in the 0.1% group (Johnsen's score was significantly decreased compared to control). A dose-dependent increase in Sertoli cell vacuolation was observed at 0.01 % (16.7-fold) and 0.1% (18.9-fold) compared to control. The number of lymphocytes in 1 mm2 the testicular interstitium was significantly increased at 0.01% (19.2) and 0.1% (22.6) compared to control (0). A significant increase in F4/80+ macrophages (~2-fold) and MHC-II+ cells (~1-fold) were seen at both 0.01% and 0.1% compared to control. Real-time RT-PCR analysis of RNA extracted from the testes indicated that there was a significant ~4-fold increase in IFN-γ expression and ~2.5-fold increase in IL-10 expression in both DEHP-exposed groups as compared to the control group. There was no treatment-related change in testicular mRNA expression of TNF-α or IL-6. As opposed to the negative result for the control group, HRP stain was detected inside the lumen of a few seminiferous tubules beyond the BTB in both 0.01% or 0.1% DEHP. No author-reported toxicity values were provided. Based on the data presented in the study, a LOAEL of 0.01% DEHP in chow was identified based on significantly increased Sertoli cell vacuolation, increased lymphocyte infiltration in the testes, and increased permeability of blood-testes barrier. Macrophage and MHC-II cells were also increased in the testes along with increased mRNA expression of cytokines (IFN-γ and IL-10).

[14] 674395: In a study assessing whether prepubertal exposure to DEHP affects female reproductive functions in adulthood, female Wistar-Imamichi rats (5-6 per cage) were exposed (presumably whole body) for 6 hrs/day, 5 days per week to DEHP (purity 99%) nominal vapor concentrations of 0, 5, and 25 mg/m3 in two separate experiments. No details of atmosphere generation were provided, but the atmospheres were continuously supplied into the exposure chambers suggesting a dynamic atmosphere. Details of the controls (e.g., air only, untreated) were not specified, and there is no statement in the text explicitly saying they were concurrent. In the first experiment, rats (n = 10/group) were exposed from PND22 until PND84. In the second experiment, animals (n = 12/group) were exposed from PND22 until PND42. The second experiment is described here. In the second experiment, analytical concentrations were 5.21 $\pm$ 2.73 and 22.72 $\pm$ 7.59 mg/m3, corresponding to nominal concentrations of 5 and 25 mg/m3, respectively. Animals were purportedly observed for visible signs of toxicity, although details of this were not reported in the methods. Animals were examined for vaginal opening prior to each daily exposure; body weights were recorded at the same time. Food and water consumption were also monitored (no additional details). Animals were monitored for estrous cyclicity status on PND42 and were then sacrificed. Blood was collected at sacrifice for serum hormone analysis (FSH, LH, testosterone, and estradiol), and for measurement of serum total cholesterol. The lung, liver, kidney, ovary, and uterus were weighed. RNA was extracted from the left ovaries for gene expression analysis (real-time qPCR).There were no clinical signs of toxicity or effects on animal body weights or on daily food or water intake (data not shown). The age at vaginal opening, and the age at first estrous, PND 29.2 and 29.5 at 5 and 25 mg/m3, respectively, were significantly lower than in controls (PND 31.8). At sacrifice, there were no differences between controls and exposed animals in the number of animals in diestrous vs. proestrous/estrous. Levels of estradiol were significantly elevated at 25 mg/m3, and LH was increased in the low-concentration group only. Serum total cholesterol was significantly elevated in both exposure groups. No significant differences in the expression of genes encoding enzymes involved in estradiol biosynthesis were observed. No author-reported toxicity values were provided. A LOAEC of 4.10 mg/m3 (5.0 mg/mg3 nominal) was determined based on a reduced age of vaginal opening and first estrous cycle in female rats. A NOAEC was not determined.

[15] 674395: In a study assessing whether prepubertal exposure to DEHP affects female reproductive functions in adulthood, female Wistar-Imamichi rats (5-6 per cage) were exposed (presumably whole body) for 6 hrs/day, 5 days per week to DEHP (purity 99%) nominal vapor concentrations of 0, 5, and 25 mg/m3 in two separate experiments. No details of atmosphere generation were provided, but the atmospheres were continuously supplied into the exposure chambers suggesting a dynamic atmosphere. Details of the controls (e.g., air only, untreated) were not specified, and there is no statement in the text explicitly saying they were concurrent. In the first experiment, rats (n = 10/group) were exposed from PND22 until PND84. In the second experiment, animals (n = 12/group) were exposed from PND22 until PND42. The second experiment is described here. In the second experiment, analytical concentrations were 5.21 $\pm$ 2.73 and 22.72 $\pm$ 7.59 mg/m3, corresponding to nominal concentrations of 5 and 25 mg/m3, respectively. Animals were purportedly observed for visible signs of toxicity, although details of this were not reported in the methods. Animals were examined for vaginal opening prior to each daily exposure; body weights were recorded at the same time. Food and water consumption were also monitored (no additional details). Animals were monitored for estrous cyclicity status on PND42 and were then sacrificed. Blood was collected at sacrifice for serum hormone analysis (FSH, LH, testosterone, and estradiol), and for measurement of serum total cholesterol. The lung, liver, kidney, ovary, and uterus were weighed. RNA was extracted from the left ovaries for gene expression analysis (real-time qPCR).There were no clinical signs of toxicity or effects on animal body weights or on daily food or water intake (data not shown). The age at vaginal opening, and the age at first estrous, PND 29.2 and 29.5 at 5 and 25 mg/m3, respectively, were significantly lower than in controls (PND 31.8). At sacrifice, there were no differences between controls and exposed animals in the number of animals in diestrous vs. proestrous/estrous. Levels of estradiol were significantly elevated

at 25 mg/m3, and LH was increased in the low-concentration group only. Serum total cholesterol was significantly elevated in both exposure groups. No significant differences in the expression of genes encoding enzymes involved in estradiol biosynthesis were observed. No author-reported toxicity values were provided. A LOAEC of 4.10 mg/m3 (5.0 mg/mg3 nominal) was determined based on a reduced age of vaginal opening and first estrous cycle in female rats. A NOAEC was not determined.

[16] 697420: In an oral toxicity study, immature male Sprague-Dawley rats (4 animals/group) were gavaged daily with 0, 10, 100, or 500 mg/kg body weight/day of Di-(2 ethylhexyl) phthalate (DEHP) from postnatal day (PNDs) 21 to 35. Clinical signs, abnormal behaviors, and body weights were recorded daily throughout the experimental period. Body weights, absolute organ weights (testis, epididymis, prostate, and seminal vesicles), and anogenital distances were measured at the time of necropsy. Circulating testosterone and luteinizing hormone (LH) levels in serum were measured immediately following euthanasia. Some testes (number per group on specified) were examined by histopathology. Total RNA was isolated from 4 testes/group of both the vehicle group and the 100 mg/kg bw/day DEHP group, and expression of 37,317 genes were assessed using cDNA microarrays. Real-time PCR was used as a validation method and to detect gene expression of steroidogenesis-related genes (StAR, Cyp11a1, HSD3b1) and common target genes of endocrine disruptors (CaBP1, Vav2, Plcd1, Lhx1, Isoc1) in the vehicle group and all DEHP-exposed groups. Clinical signs, abnormal behaviors, and body weights measured throughout the experimental period were not reported in the results. Body weights at necropsy were not significantly altered with DEHP exposure. Absolute testis weights were significantly decreased by ~43% in the 500 mg/kg bw/day group as compared to the vehicle control. Animals exposed to the lowest dose of DEHP (10 mg/kg bw/day) exhibited a significant reduction (~48%) in absolute epididymis weights. DEHP treatment resulted in similar reductions in absolute prostate weight in animals of the 10 and 100 mg/kg bw/day groups (~54% decreased), and a larger reduction in animals of the 500 mg/kg bw/day group (~83% decreased). There were significant treatment-related changes observed in absolute seminal vesicle weight, however, these changes were not dose-dependent. Anogenital distance was significantly reduced in the 500 mg/kg bw/day group as compared to the vehicle control group. Circulating testosterone levels were significantly reduced by ~50% in all DEHP-exposed groups as compared to the vehicle-treated group. Circulating LH levels were not significantly altered with DEHP treatment, but did appear reduced in a dose-related manner. From histopathological analysis of the testes, it was determined that all DEHP-treated groups exhibited degeneration of Leydig cells and disorders of germ cells in the reproductive tract. However, only in the more highly exposed groups (100 and 500 mg/kg bw/day) was dilation of the tubular lumen and stratification of germ cells observed. Gene expression in immature rat testes was significantly altered by treatment with 100 mg/kg bw/day DEHP. Upregulated genes included those belonging to the signal transduction (Omp, Gnb5, Olr1366, Kiss1r), metabolic process (Aipl1), catabolic process (Tpc1808, Plcd1), integral to membrane (Olr748_predicted), and “other” (RGD1308066_predicted, Rbm34, Doxl2) functional categories. Downregulated genes included those belonging to the signal transduction (Alcam), mitochondrion (Mrps30_predicted), metabolic process (Isoc1), integral to membrane (Lmbrd1), and “other” (RGD1561121_predicted, Orc41, Rad1_predicted, RGD1559623_predicted, RGD1562949_predicted) functional categories. From RT-PCR analysis, steroidogenesis-related gene expression, as well as CaBP1 and Vav2 expression, were not altered with DEHP exposure. Expression of Plcd1 and Lhx1 were significantly increased, ~80% and ~70% respectively, in only the 100 mg/kg bw/day group, as compared to the control. Conversely, Isoc1 gene expression was significantly reduced (~60%) in the highest exposure group (500 mg/kg bw/day). No author-reported toxicity values were provided. Based on the data presented in the study, a LOAEL of 10 mg/kg bw/day DEHP was identified based on significantly decreased absolute prostate weight, decreased circulating testosterone levels, and histopathological changes in male reproductive organs.

[17] 697420: In an oral toxicity study, immature male Sprague-Dawley rats (4 animals/group) were gavaged daily with 0, 10, 100, or 500 mg/kg body weight/day of Di-(2 ethylhexyl) phthalate (DEHP) from postnatal day (PNDs) 21 to 35. Clinical signs, abnormal behaviors, and body weights were recorded daily throughout the experimental period. Body weights, absolute organ weights (testis, epididymis, prostate, and seminal vesicles), and anogenital distances were measured at the time of necropsy. Circulating testosterone and luteinizing hormone (LH) levels in serum were measured immediately following euthanasia. Some testes (number per group on specified) were examined by histopathology. Total RNA was isolated from 4 testes/group of both the vehicle group and the 100 mg/kg bw/day DEHP group, and expression of 37,317 genes were assessed using cDNA microarrays. Real-time PCR was used as a validation method and to detect gene expression of steroidogenesis-related genes (StAR, Cyp11a1, HSD3b1) and common target genes of endocrine disruptors (CaBP1, Vav2, Plcd1, Lhx1, Isoc1) in the vehicle group and all DEHP-exposed groups. Clinical signs, abnormal behaviors, and body weights measured throughout the experimental period were not reported in the results. Body weights at necropsy were not significantly altered with DEHP exposure. Absolute testis weights were significantly decreased by ~43% in the 500 mg/kg bw/day group as compared to the vehicle control. Animals exposed to the lowest dose of DEHP (10 mg/kg bw/day) exhibited a significant reduction (~48%) in absolute epididymis weights. DEHP treatment resulted in similar reductions in absolute prostate weight in animals of the 10 and 100 mg/kg bw/day groups (~54% decreased), and a larger reduction in animals of the 500 mg/kg bw/day group (~83% decreased). There were significant treatment-related changes observed in absolute seminal vesicle weight, however, these changes were not dose-dependent. Anogenital distance was significantly reduced in the 500 mg/kg bw/day group as compared to the vehicle control group. Circulating testosterone levels were significantly reduced by ~50% in all DEHP-exposed groups as compared to the vehicle-treated group. Circulating LH levels were not significantly altered with DEHP treatment, but did appear reduced in a dose-related manner. From histopathological analysis of the testes, it was determined that all DEHP-treated groups exhibited degeneration of Leydig cells and disorders of germ cells in the reproductive tract. However, only in the more highly exposed groups (100 and 500 mg/kg bw/day) was dilation of the tubular lumen and stratification of germ cells observed. Gene expression in immature rat testes was significantly altered by treatment with 100 mg/kg bw/day DEHP. Upregulated genes included those belonging to the signal transduction (Omp, Gnb5, Olr1366, Kiss1r), metabolic process (Aipl1), catabolic process (Tpc1808, Plcd1), integral to membrane (Olr748_predicted), and “other” (RGD1308066_predicted, Rbm34, Doxl2) functional categories. Downregulated genes included those belonging to the signal transduction (Alcam), mitochondrion (Mrps30_predicted), metabolic process (Isoc1), integral to membrane (Lmbrd1), and “other” (RGD1561121_predicted, Orc41, Rad1_predicted, RGD1559623_predicted, RGD1562949_predicted) functional categories. From RT-PCR analysis, steroidogenesis-related gene expression, as well as CaBP1 and Vav2 expression, were not altered with DEHP exposure. Expression of Plcd1 and Lhx1 were significantly increased, ~80% and ~70% respectively, in only the 100 mg/kg bw/day group, as compared to the control. Conversely, Isoc1 gene expression was significantly reduced (~60%) in the highest exposure group (500 mg/kg bw/day). No author-reported toxicity values were provided. Based on the data presented in the study, a LOAEL of 10 mg/kg bw/day DEHP was identified based on significantly decreased absolute prostate weight, decreased circulating testosterone levels, and histopathological changes in male reproductive organs.

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Diethylhexyl Phthalate- Parent compound - Subchronic (>30-91 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
American Physiology Society's "Guides for the Care and Use of Laboratory Animals" published by the National Institutes of Health Mouse-ICR - [mouse]-Male	Oral-Gavage-Duration: Subchronic (>30-90 days)-7-5-week(s) 7 days/week 5 week(s) Mice were administered DINP or DEHP (0.05 and 4.8 mg/kg bw), corn oil vehicle control group daily via gavage for 5 weeks.	**POD: 0.05 mg/kg-bw/day (LOAEL) -Significant increase of body weight in mice and increased oxidative stress, reduced GSH and MDA** n= 8 Dose= 0, n= 8 Dose= 0.05, n= 8 Dose= 4.8, mg/kg-bw/day	See footnotes for full summary [1]	Limitation of this study was the lack of data on food intake and changes of adipose tissue which are useful in interpreting the body weight changes observed in the low dose groups	Nutritional/Metabolic-Body weight-Renal/Kidney-organ weight, renal biomarkers for oxidative stress (ROS, MDA, GSH), inflammatory cytokines (TNF-a and IL-6); Medium	Gu et. al 2021 7978408
Adherence to a guideline was not specified. Mouse-A/J - [mouse]-Male	Oral-Diet-Duration: Subchronic (>30-90 days)-7-8-week(s) 7 days/week 8 week(s) 8 week exposure	**POD: 0.01 % (in water or food) (LOAEL) -Significantly increased Sertoli cell vacuolation, increased lymphocyte infiltration in the testes, and increased permeability of blood-testes barrier. Macrophage and MHC-II cells were also increased in the testes along with increased mRNA expression of cytokines (IFN-γ and IL-10).** n= 15 Dose= 0, n= 15 Dose= 0.01, n= 15 Dose= 0.1, % (in water or food)	See footnotes for full summary [2]	Major limitations included a lack of detail on the test substance and uncertainty about which duration (i.e., 2, 4, or 8 weeks) the presented body weights and testis weights were measured from. In addition, body weights were not measured throughout the course of the experiment and, thus, could not be used to independently verify the daily dose per animal.	Reproductive/Developmental-Absolute testis weight, Histological analyses of testes: degree of spermatogenic disturbance (Johnsen's score), numbers of seminiferous tubules with vacuoles in the cytoplasm of Sertoli cells; determination of the permeability of the blood-testis-barrier ((horseradish peroxidase detection)-Immune/Hematological-Lymphocyte infiltration into testicular interstium; Immunohistochemistry for T-cells (CD3), B-cells (CD45R/B220), macrophages (F4/80), MHC-II, IFNγ, and IL-10; mRNA expression of cytokines (IFNγ, TNFα, IL-6, and IL-10) in the testis; Medium	Kitaoka et. al-2013 2000828

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Diethylhexyl Phthalate- Parent compound - Subchronic (>30-91 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
"All procedures were performed according to a protocol approved by the Animal Care and Use Committee of the Laboratory of Animal Experimentation in Hokkaido University." Rat-Wistar - [rat]-Male	Inhalation-Vapor-Duration: Subchronic (>30-90 days)-5-6-8-week(s) 6 hours/day 5 days/week 8 week(s) Rats were exposed 6 hours/day, 5 days/week for 4 or 8 weeks	**POD: 5 mg/m^3 (LOAEL) - Reproductive: Increased plasma testosterone levels, increased absolute weight of seminal vesicles** n= 6 Dose= 0, n= 6 Dose= 5, n= 6 Dose= 25, mg/m^3	See footnotes for full summary [3]	The study did not state if cages and water bottles were plastic. Co-exposure to plasticizers should be avoided when studying endocrine disruptors such as DEHP because they have the potential to confound the effects of the chemical of interest.	Nutritional/Metabolic-Body weight-Reproductive/Development-Serum testosterone, luteinizing hormone (LH), and follicle stimulating hormone (FSH), organ weights (testes, epididymis, seminal vesicles and ventral prostate), histology on testis (histopathologic changes and progression of spermatogenesis), and testicular mRNA levels of enzymes involved in testosterone biosynthesis (P450scc, 3B-HSD, CYP17 and CYP19); Medium	Kurahashi et. al 2005 674255
Non-guideline study, GLP not specified. The study referenced the Female Pubertal Protocol on the influence of prepubertal exposure to endocrine-disruptingchemicals reviewed by Goldman et al. (2000) Rat-Other (Wistar-Imamichi)-Female	Inhalation-Vapor-Duration: Subchronic (>30-90 days) Animals were exposed as weanlings 6hrs/day, 5 days/week from PND 22 to PND 84	**POD: 4.1 mg/m^3 (LOAEC) -Reduced age at time of vaginal opening and first estrous** n= 10 Dose= 0, n= 10 Dose= 4.10, n= 10 Dose= 19.78, mg/m^3	See footnotes for full summary [4]	This study has some reporting deficiencies, namely in exposure method details (exposure apparatus, atmosphere generation, location of air sampling), and also in clearly defining the controls (if they were concurrent and air only). The study authors identified a few limitations. The protocol referenced specified daily exposures from PND 22 through PND 42. In this study, animals were only exposed 6hrs/day 5 days/week due to the limited availability of the inhalation device. The authors also noted that pituitary samples were not collected even though they have evidence suggesting possible DEHP pituitary effects. Finally, they indicated that analysis of tissue distribution of DEHP and its metabolites was not conducted because they did not use a physiologically based pharmacokinetic model.	Reproductive/Development-Serum hormones (FSH, LH, testosterone, estradiol); gene expression in ovaries (real-time RT-PCR), estrous cyclicity, ovary and uterus organ weights, day of vaginal opening; Medium	Ma et. al 2006 674395

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Diethylhexyl Phthalate- Parent compound - Subchronic (>30-91 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
Non-guideline study, GLP not specified. The study referenced the Female Pubertal Protocol on the influence of prepubertal exposure to endocrine-disruptingchemicals reviewed by Goldman et al. (2000) Rat-Other (Wistar-Imamichi)-Female	Inhalation-Vapor-Duration: Subchronic (>30-90 days) Animals were exposed as weanlings 6hrs/day, 5 days/week from PND 22 to PND 84	**POD: 4.1 mg/m^3 (LOAEC) -Reduced age at time of vaginal opening and first estrous** n= 10 Dose= 0, n= 10 Dose= 4.10, n= 10 Dose= 19.78, mg/m^3	See footnotes for full summary [5]	This study has some reporting deficiencies, namely in exposure method details (exposure apparatus, atmosphere generation, location of air sampling), and also in clearly defining the controls (if they were concurrent and air only). The study authors identified a few limitations. The protocol referenced specified daily exposures from PND 22 through PND 42. In this study, animals were only exposed 6hrs/day 5 days/week due to the limited availability of the inhalation device. The authors also noted that pituitary samples were not collected even though they have evidence suggesting possible DEHP pituitary effects. Finally, they indicated that analysis of tissue distribution of DEHP and its metabolites was not conducted because they did not use a physiologically based pharmacokinetic model.	Reproductive/Development; Serum hormones (FSH, LH, testosterone, estradiol); gene expression in ovaries (real-time RT-PCR), estrous cyclicity, ovary and uterus organ weights, day of vaginal opening; Medium	Ma et. al 2006 674395

* Overall Quality Determination

[1] 7978408: Male ICR mice were exposed to DINP or DEHP of 0.05 (low dose) and 4.8 mg/kg bw (high dose), and corn oil vehicle (control group) daily via gavage for 5 weeks to evaluate the renal toxicity. Mice administered a low dose (0.05 mg/kg bw) showed a significant increase in body weight, while those given a high dose (4.8 mg/kg bw) exhibited a decrease, compared to the control group. Despite changes in body weight, no differences in kidney organ weight were observed between the control and treatment groups. Urinary metabolites revealed that the major metabolites of DEHP (MEHP, MEOHP, MEHHP, and MECPP) and DINP (MINP and MCOP) were approximately two-fold higher in the high dose group compared to the control in DINP/DEHP treated groups. The study revealed that phthalates induced oxidative stress and disrupted metabolic responses. Notably, there was an increase in renal ROS and MDA levels and decrease in GSH levels at higher doses of DINP/DEHP. Additionally, elevated levels of inflammatory cytokines (TNF-a and IL-6) were observed following higher exposure. 246 lipids were quantifiable, including ceramides (Cer), sphingomyelin (SM), phosphatidylcholine (PC), PC alkyl ether [PC-(O)], PC plasmalogen [PC-(P)], lyso PC (LPC), di-acylglyceride (DG), tri-acylglyceride (TG), and cholesterol esters (CE), as well as other groups. Lipidomic alterations induced by high doses were significant, particularly in phospholipids and diacylglycerides, which accumulated and contributed to inflammation and metabolic disruption. Additionally, a heatmap analysis indicated marginal changes in the lipidomic profile, with a notable reduction in certain lipids, including specific sphingolipids and glycolipids (Cer, SM, PC, LPC) identified in the higher dose group. On the contrary, DG and some CE were found to be substantially elevated in DINP/DEHP high doses treated mice compared to the control mice. Variable importance in projection (VIP) scores calculated using the PLS-DA model identified differential lipid molecules induced by phthalate exposure, included DG (DG 16:0_20:3, DG 16:0_18:2, DG 16:0_18:0, DG 18:1_18:2, DG 18:1_18:3, and DG 16:0_16:0), all which VIP scores exceeding 4, suggesting high predictability for phthalate induced disruptions in lipid metabolism.

[2] 2000828: In an oral toxicity study, 7-week-old male A/J mice received chow containing 0, 0.01%, or 0.1% of di-(2-ethylhexyl) phthalate (DEHP) for 8 weeks (15 mice/group). The study authors state that these concentrations of DEHP in chow equated to daily doses of 0.0113-0.0133 mg/g/day for 0.01% and 0.1152-0.1357 mg/g/day for 0.1%; it is unclear if this is based on food intake and body weights from this study. Food and water consumption were monitored by the study authors. At the end of the treatment period, the mice (10 mice/group) were weighed, euthanized, and their testes were removed and weighed. Histological samples were taken from the right testis, whereas total RNA and immunohistological samples were taken from the left testis. The authors assessed multiple parameters by histology including degree of spermatogenic disturbance (Johnsen's score), Sertoli cell vacuolation, and the number of lymphocytes in the testicular interstitium. Immunohistochemistry for T-cells (CD3), B- cells (CD45R/B220), macrophages (F4/80), MHC-II, IFNγ and IL-10 was performed along with determining mRNA expression of cytokines (IFNγ, TNFα, IL-6, and IL-10) in the testis. The remaining five animals/group dosed with horseradish peroxidase (HRP; 10 mg/kg body weight i.p.) 30 minutes prior to euthanasia to evaluate the integrity of the blood-testis barrier (BTB) by histochemistry. This paper exposed mice for 2, 4 or 8 weeks (n=10/group/timepoint). The study reports data for body weight, food intake, water intake and testis weight however, the data was not separated out for each timepoint. For example, mean food intake was reported to be 4.84 $\pm$0.43, 4.72 $\pm$0.23, and 4.63 $\pm$ 0.36 at 0, 0.01% and 0.1%, respectively, it was not clear which animals were included in these calculations. Water intake was reported only to be approximately 7 ml/day for the three dose groups. The study shows a table reporting no significant difference in body weights or absolute testis weights from control, however it cannot be determined which duration these data came from. From histopathological analysis of the testes, it was noted that spermatogenic disturbance was present in the 0.1% group (Johnsen's score was significantly decreased compared to control). A dose-dependent increase in Sertoli cell vacuolation was observed at 0.01 % (16.7-fold) and 0.1% (18.9-fold) compared to control. The number of lymphocytes in 1 mm2 the testicular interstitium was significantly increased at 0.01% (19.2) and 0.1% (22.6) compared to control (0). A significant increase in F4/80+ macrophages (~2-fold) and MHC-II+ cells (~1-fold) were seen at both 0.01% and 0.1% compared to control. Real-time RT-PCR analysis of RNA extracted from the testes indicated that there was a significant ~4-fold increase in IFN-γ expression and ~2.5-fold increase in IL-10 expression in both DEHP-exposed groups as compared to the control group. There was no treatment-related change in testicular mRNA expression of TNF-α or IL-6. As opposed to the negative result for the control group, HRP stain was detected inside the lumen of a few seminiferous tubules beyond the BTB in both 0.01% or 0.1% DEHP. No author-reported toxicity values were provided. Based on the data presented in the study, a LOAEL of 0.01% DEHP in chow was identified based on significantly increased Sertoli cell vacuolation, increased lymphocyte infiltration in the testes, and increased permeability of blood-testes barrier. Macrophage and MHC-II cells were also increased in the testes along with increased mRNA expression of cytokines (IFN-γ and IL-10).

[3] 674255: Twenty-eight-day old, prepubertal male Wistar rats (12/group) were exposed to 0, 5, or 25 mg/m3 of DEHP 6 hours/day, 5 days/week via whole body inhalation. Six rats/group were sacrificed after 4 weeks of exposure, the remaining 6 rats/group were exposed for another 4 weeks (total of 8 weeks). Rats were sacrificed on the day which exposure ended. Endpoints evaluated included body weight, serum testosterone, luteinizing hormone (LH), and follicle stimulating hormone (FSH), organ weights (testes, epididymis, seminal vesicles and ventral prostate), histology on testis (histopathologic changes and progression of spermatogenesis), and testicular mRNA levels of enzymes involved in testosterone biosynthesis (P450scc, 3B-HSD, CYP17 and CYP19). Seminiferous tubules were classified as immature or mature based on if the progression of spermatogenesis was sufficient quantitatively. Proportions of tubules with histopathologic changes and immature tubules were evaluated based on a semiquantitative grading system (method cited in HERO 2850042; Lanning et al. 2002). No significant differences in terminal body weights were seen compared to control. After 8 weeks of exposure, absolute seminal vesicle weight was significantly increased (30% and 31%) at 5 and 25 mg/m3, respectively compared to control; no difference was seen at 4 weeks. No significant differences in absolute testis, epididymis or ventral prostate weight were seen at either timepoint compared to control. At 4 weeks, plasma testosterone levels were significantly increased (~4-fold) at 5 mg/m3; at 25 mg/m3 levels were increased 3-fold however this was not significantly different from control. At 8 weeks, plasma testosterone levels were significantly increased (~2-fold and ~2-fold) at 5 and 25 mg/m3, respectively compared to control. No significant difference in plasma FSH, or LH levels were seen compared to control. Exposure to DEHP did not result in any apparent histopathological damage to the testis, or change in proportion of immature tubules compared to control. No change in testicular mRNA expression of enzymes involved in testosterone biosynthesis were seen. A LOAEL of 5 mg/m3 was determined based on increased plasma testosterone levels and increased absolute weight of seminal vesicles.

[4] 674395: In a study assessing whether prepubertal exposure to DEHP affects female reproductive functions in adulthood, female Wistar-Imamichi rats (5-6 per cage) were exposed (presumably whole body) for 6 hrs/day, 5 days per week to DEHP (purity 99%) nominal vapor concentrations of 0, 5, and 25 mg/m3 in two separate experiments. No details of atmosphere generation were provided, but the atmospheres were continuously supplied into the exposure chambers suggesting a dynamic atmosphere. Details of the controls (e.g., air only, untreated) were not specified, and there is no statement in the text explicitly saying they were concurrent. In the first experiment, rats (n = 10/group) were exposed from PND22 until PND84. In the second experiment, animals (n = 12/group) were exposed from PND22 until PND42. The first experiment is described here. In the first experiment, analytical concentrations were 4.10 $\pm$ 1.96 and 19.78 $\pm$ 3.69 mg/m3, corresponding to nominal concentrations of 5 and 25 mg/m3, respectively. Animals were purportedly observed for visible signs of toxicity, although details of this were not reported in the methods. Animals were examined for vaginal opening prior to each daily exposure; body weights were recorded at the same time. After the first cycle, monitoring was stopped until PND49, and then changes in estrous cyclicity were monitored from PND49 to 84. The animals were sacrificed on PNDs 85-88 at the time of diestrous. Blood was collected at sacrifice for serum hormone analysis (FSH, LH, testosterone, and estradiol), and for measurement of serum total cholesterol. The lung, liver, kidney, ovary, and uterus were weighed. RNA was extracted from the left ovaries for gene expression analysis (real-time qPCR).No animals showed visible signs of toxicity. Mean body weights were lower between exposure days 24 to 63 in both exposure groups, and the decreases were significant at 25 mg/m3. It is not clear that body weights were measured after PND63. The age of vaginal opening was significantly lower occurring on PND 30.3 and 29.7 in the 5 and 25mg/m3 exposure groups, respectively, compared to PND 32.0 in controls. Similarly, the age at first estrous was also earlier than controls. There were no differences in animal body weights at each of these time points. Overall, between PNDs 49-84, there was a significant increase in the percentage of animals in the 25 mg/m3 group with irregular estrous cycles. There were no statistically significant differences in the concentrations of serum hormones, although there was a non-significant tendency for decreased testosterone. Serum cholesterol levels were significantly decreased in both exposure groups. Gene expression analysis of genes encoding enzymes involved in estradiol biosynthesis showed an elevation (145%) in the expression of aromatase, an enzyme involved in the conversion of testosterone to estradiol at 25 mg/m3. No other alterations were observed. There were no differences in any absolute or relative organ weights (data were not shown). No author-reported toxicity values were provided. A LOAEC of 4.10 mg/m3 (5.0 mg/mg3 nominal) was determined based on a reduced age of vaginal opening and first estrous cycle in female rats. A NOAEC was not determined.

[5] 674395: In a study assessing whether prepubertal exposure to DEHP affects female reproductive functions in adulthood, female Wistar-Imamichi rats (5-6 per cage) were exposed (presumably whole body) for 6 hrs/day, 5 days per week to DEHP (purity 99%) nominal vapor concentrations of 0, 5, and 25 mg/m3 in two separate experiments. No details of atmosphere generation were provided, but the atmospheres were continuously supplied into the exposure chambers suggesting a dynamic atmosphere. Details of the controls (e.g., air only, untreated) were not specified, and there is no statement in the text explicitly saying they were concurrent. In the first experiment, rats (n = 10/group) were exposed from PND22 until PND84. In the second experiment, animals (n = 12/group) were exposed from PND22 until PND42. The first experiment is described here. In the first experiment, analytical concentrations were 4.10 $\pm$ 1.96 and 19.78 $\pm$ 3.69 mg/m3, corresponding to nominal concentrations of 5 and 25 mg/m3, respectively. Animals were purportedly observed for visible signs of toxicity, although details of this were not reported in the methods. Animals were examined for vaginal opening prior to each daily exposure; body weights were recorded at the same time. After the first cycle, monitoring was stopped until PND49, and then changes in estrous cyclicity were monitored from PND49 to 84. The animals were sacrificed on PNDs 85-88 at the time of diestrous. Blood was collected at sacrifice for serum hormone analysis (FSH, LH, testosterone, and estradiol), and for measurement of serum total cholesterol. The lung, liver, kidney, ovary, and uterus were weighed. RNA was extracted from the left ovaries for gene expression analysis (real-time qPCR).No animals showed visible signs of toxicity. Mean body weights were lower between exposure days 24 to 63 in both exposure groups, and the decreases were significant at 25 mg/m3. It is not clear that body weights were measured after PND63. The age of vaginal opening was significantly lower occurring on PND 30.3 and 29.7 in the 5 and 25mg/m3 exposure groups, respectively, compared to PND 32.0 in controls. Similarly, the age at first estrous was also earlier than controls. There were no differences in animal body weights at each of these time points. Overall, between PNDs 49-84, there was a significant increase in the percentage of animals in the

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Diethylhexyl Phthalate- Parent compound - Chronic (>91 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
The authors do no report the use of any specific guide-line or compliance methods. Rat-Sprague-Dawley - [rat]-Male	Oral-Diet-Duration: Chronic (>90 days)-7-24-102-week(s) 24 hours/day 7 days/week 102 week(s) Dietary exposure in which the food was available ad libitum for 102 weeks	**POD: 0.02 % (in water or food) (NOAEL) -Decreased body weights** Dose= 0, Dose= 0.02, Dose= 0.2, Dose= 2, % (in water or food)	See footnotes for full summary [1]	This study has significant reporting limitations including the number of animals per group, test animal source, and lack of information to determine a reliable dose. Only a % in the diet was reported and feed intake was not measured. Other details including methodological details and statistical methods used were insufficient or not provided, and no measures of variance were included in any data figures.	Nutritional/Metabolic-Body Weight-Reproductive/Development-Testes histology and cell appearance; testes function as measured by inhibition of spermatogenesis and instances of general tubular atrophy-Hepatic/Liver-Liver histology, (both light and electron microscopy); liver enzyme activities: catalase and palmitoyl-CoA (ho-mogenate), carnitine acetyltransferase and cytochrome oxidase (mitochondria), and CYP-450, NADH and NADPH cytochrome c reductase (micro-somes); Uninformative	Ganning et. al 1990 679540

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Diethylhexyl Phthalate- Parent compound - Chronic (>91 days)

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
No guideline or adherence to GLP conditions was specified. Rat-Sprague-Dawley - [rat]-Male	Oral-Diet-Duration: Chronic (>90 days)-7-24-102-week(s) 7 days/week 1 year(s) Animals were exposed via the diet for 1 year	**POD: % (in water or food) (Other) -** Dose= 0, Dose= 0.2, Dose= 2, % (in water or food)	In a poorly described experiment, Sprague Dawley rats (presumably males, number/group not specified) were fed diets containing 0, 0.2, or 2% DEHP for 1 year. A subset of animals (5/group) were then sacrificed at the end of exposure (both treated and controls), and after 1, 2, and 3 weeks after being switched to normal diets (treatment groups only). At sacrifice, liver homogenate, mitochondrial, and microsomal fractions isolated for enzyme measurements: Catalase and palmitoyl-CoA (homogenate), carnitine acetyltransferase and cytochrome oxidase (mitochondria), and CYP-450 and NADPH cytochrome c reductase (microsomes). In the 2% dietary DEHP group, except for cytochrome oxidase, which was comparable to control levels, the enzyme activities in each hepatic fraction were higher than controls immediately following treatment. These levels returned to the control levels within 2 weeks of no treatment. The study qualitatively reported that in the 0.2% group, elevated enzyme levels similarly returned to normal within two weeks. The statistical significance and adversity of these changes are unclear. No POD was determined.	Insufficient details about this study were provided in the report making this study uninformative.	Hepatic/Liver-Liver histology, (both light and electron microscopy); liver enzyme activities: catalase and palmitoyl-CoA (homogenate), carnitine acetyltransferase and cytochrome oxidase (mitochondria), and CYP-450, NADH and NADPH cytochrome c reductase (microsomes); Uninformative	Ganning et. al 1990 679540

* Overall Quality Determination

[1] 679540: In a study focused on assessing the effects of prolonged di(2-ethylhexyl)phthalate (DEHP) treatment on liver function, adult Sprague Dawley rats (520 total; number per group not specified), were administered DEHP (purity >99%), at concentrations of 0, 0.02, 0.2, and 2% in the diet, for up to 102 weeks. The doses in mg/kg-day were not reported. The timing of endpoint assessments was not clearly reported for all endpoints. Mortality nor survival was not reported. Animal body weights were recorded from 7-18 rats per group on weeks 4, 18, 33, 42, 57, 73, and 102. It was stated that liver "homogenates, mitochondria, and microsomes were prepared from all animals used." Protein concentrations in these fractions were measured in weeks 4, 18, 33, 42, 57, 73, and 102 weeks from 9-14 animals at each timepoint. The activity of palmitoyl-CoA dehydrogenase activity, liver catalase and urate oxidase activities in liver homogenates were also measured at the same time points from 6-11 animals/group/timepoint. Presumably in the same animals, mitochondrial fractions were analyzed for cytochrome oxidase activity and carnitine-acetyltransferase activity. Microsomal enzymes measured included NADH-cytochrome c reductase, NADPH-cytochrome c reductase, and cytochrome P-450 activities. Isolated hepatocytes from rats treated for 16 months were examined via electron microscopy (number not specified); however, the text also describes electron micrograph changes in the 2% group after one week of exposure. Livers and testes were histologically examined (numbers not specified). Note that it appears that no statistical analysis was conducted on some endpoints. The "general health" of rats was reported to be good throughout the study period. Terminal body weights in animals sacrificed at week 4 were comparable across groups. At 18-102 weeks, body weights of male rats in the 0.2% and 2% DEHP groups were significantly decreased, compared with controls, and were reported to be decreased by 20% and 10% in the animal exposed to the 2% and 0.2% DEHP diets, respectively. It was noted that the reduced body weights coincided with a visible reduction in abdominal fat. No effects on body weight were observed in the 0.02% group at any time point. Election microscopy of hepatocytes in the 2% group showed peroxisomal proliferation beginning just one week after the start of treatment; at 16 months peroxisome structure was often missing, and mitochondria were in a condensed state. In the 0.2% group (16 months) there was an increase in the number of peroxisomes with lower densities and decreased core sizes; a slight increase in the number of mitochondria in a condensed state. Electron micrographs of the 0.02% group were generally described as normal. In all cases, there were no significant changes in the endoplasmic reticulum. Hepatic mitochondrial protein concentration was considerably elevated at ≥0.2% throughout the entire study period. Levels in the 0.02% group were comparable to controls, and microsomal protein content was not influenced by treatment. Levels of peroxisomal enzymes in liver homogenates were elevated over controls in all treatment groups. Catalase activity showed an initial drop in activity at the high dose that then rebounded and was higher than controls after 10 weeks the changes were statistically significant at all time points. Catalase activity in the 0.2% group was also statistically significantly higher by week 33, compared with controls, but returned to normal by the end of the study. There were no significant changes in the 0.02% dietary group. Urate oxidase activities of all treatment groups were lower than controls, and the changes occurred earlier with increasing doses. There were no effects on the mitochondrial enzyme cytochrome oxidase activity, but patterns of carnitine-acetyltransferase were altered showing significantly increased activities in all treatment groups. Finally, significant changes in the microsomal fractions included increased NADPH-cytochrome c-reductase activities at 0.02% DEHP in the diet at all time points, and increased cytochrome P-450 activity primarily in the 2% dietary group, again at all collection points. Histological analysis of the testis showed "pronounced" effects even at 0.02% DEHP including inhibition of spermatogenesis and general tubular atrophy (data not provided). The authors report that no hyperplastic nodules or primary liver carcinomas or other tumors were observed, but later state that 2 animals developed spontaneous mammary cancer. No author-reported toxicity values were provided. Based on the available data, a NOAEL of 0.02% dietary DEHP and a LOAEL of 0.2% dietary DEHP were determined based on statistically significant decreases in animal body weights. 0.02 % DEHP in the diet is considered to be a mechanistic LOEL for changes in liver enzyme activities.

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
No guideline or compliance documents were specified. Rat-Long-Evans - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD 12-21)-F0- lactation Dams were exposed GD 12-21. Male offspring were exposed in utero	**POD: 100 mg/kg-bw/day (LOAEL) -changes in serum LH and testosterone.** n= 7 Dose= 0, n= 7 Dose= 100, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 12-21, F0- lactation	See footnotes for full summary [1]	The study did not describe whether measures were taken to reduce contaminate exposure to plasticises in a study looking at reproductive and/or developmental endpoints. No details were provided for the preparation of the test substance; concentrations were not analytically verified, and the gavage volume was not reported. The study did not report using the litter as the experimental unit.	Reproductive/Developmental- Leydig cell testosterone production, serum testosterone and LH measurements, testicular histology and weight, seminal vesicles weight- Nutritional/Metabolic- Body weight and food consumption in dams and young adult rats; Medium	Akingbemi et-al 2001 673553
No guideline or compliance documents were specified. Rat-Long-Evans - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD 12-21)-F0- lactation Dams were exposed GD 12-21. Male offspring were exposed in utero	**POD: 100 mg/kg-bw/day (LOAEL) -changes in serum LH and testosterone.** n= 7 Dose= 0, n= 7 Dose= 100, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 12-21, F0- lactation	See footnotes for full summary [2]	The study did not describe whether measures were taken to reduce contaminate exposure to plasticises in a study looking at reproductive and/or developmental endpoints. No details were provided for the preparation of the test substance; concentrations were not analytically verified, and the gavage volume was not reported. The study did not report using the litter as the experimental unit.	Reproductive/Developmental- Leydig cell testosterone production, serum testosterone and LH measurements, testicular histology and weight, seminal vesicles weight- Nutritional/Metabolic- Body weight and food consumption in dams and young adult rats; Medium	Akingbemi et-al 2001 673553

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

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No guideline or compliance documents were specified. Rat-Long-Evans - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-F0- lactation (PND 1-21) Females were exposed during lactation (PND 1-21), from birth to weaning.	**POD: 100 mg/kg-bw/day (LOAEL) -changes in serum LH and testosterone.** n= 7 Dose= 0, n= 7 Dose= 100, mg/kg-bw/day Female Exposure: F0- lactation, PND 1-21	In a lactational exposure study, timed pregnant Long Evans rats (7 females/group) were administered DEHP in corn oil via oral gavage at doses of 0 (vehicle only) or 100 mg/kg-bw/day on PND 1-21. Male offspring were randomly collected from every dam and analyzed at 21, 35, and 90 days of age. Male offspring were randomly collected from every dam. Body weights were measured for dams at the beginning and end of the experiment. Body weights of offspring were measured on days 21, 35, and 90. Food intake was measured for all groups. The testes and seminal vesicles (with coagulating glands) were weighed on days 21, 35, and 90. Serum hormone levels (testosterone and LH) and Leydig cell testosterone production (basal and LH-stimulated) were measured on days 21, 35, and 90. Histological evaluations were conducted on the testes. There were no effects on body weights in dams or offspring at any time point. Weights of testes and seminal vesicles were comparable to controls in all groups. Serum testosterone concentrations were slightly decreased in offspring on PND 21 without any effect on serum level LH. There were no significant changes to serum testosterone or LH on PND 35 or 90. Histology showed no evidence of Leydig cell hyperplasia, seminiferous tubule damage, germ cell degeneration, or delayed spermiation in any group. Study authors concluded that DEHP affects Leydig cell function and steroidogenesis. Reduced serum testosterone in offspring examined on PND 21 failed to stimulate an increase in serum LH concentrations. The LOAEL was 100 mg/kg/day based on changes in serum LH and testosterone. A NOAEL was not selected because only one dose was tested.	The study did not describe whether measures were taken to reduce contaminate exposure to plasticises in a study looking at reproductive and/or developmental endpoints. No details were provided for the preparation of the test substance; concentrations were not analytically verified, and the gavage volume was not reported. The study did not report using the litter as the experimental unit.	Reproductive/Development-al-Leydig cell testosterone production, serum testosterone and LH measurements, testicular histology and weight, seminal vesicles weight-Nutritional/Metabolic-Body weight and food consumption in dams and young adult rats; Medium	Akingbemi et-al 2001 673553

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
No guideline or compliance documents were specified. Rat-Long-Evans - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-F0- lactation (PND 1-21) Females were exposed during lactation (PND 1-21), from birth to weaning.	**POD: 100 mg/kg-bw/day (LOAEL) -changes in serum LH and testosterone.** n= 7 Dose= 0, n= 7 Dose= 100, mg/kg-bw/day Female Exposure: F0- lactation, PND 1-21	In a lactational exposure study, timed pregnant Long Evans rats (7 females/group) were administered DEHP in corn oil via oral gavage at doses of 0 (vehicle only) or 100 mg/kg-bw/day on PND 1-21. Male offspring were randomly collected from every dam and analyzed at 21, 35, and 90 days of age. Male offspring were randomly collected from every dam. Body weights were measured for dams at the beginning and end of the experiment. Body weights of offspring were measured on days 21, 35, and 90. Food intake was measured for all groups. The testes and seminal vesicles (with coagulating glands) were weighed on days 21, 35, and 90. Serum hormone levels (testosterone and LH) and Leydig cell testosterone production (basal and LH-stimulated) were measured on days 21, 35, and 90. Histological evaluations were conducted on the testes. There were no effects on body weights in dams or offspring at any time point. Weights of testes and seminal vesicles were comparable to controls in all groups. Serum testosterone concentrations were slightly decreased in offspring on PND 21 without any effect on serum level LH. There were no significant changes to serum testosterone or LH on PND 35 or 90. Histology showed no evidence of Leydig cell hyperplasia, seminiferous tubule damage, germ cell degeneration, or delayed spermiation in any group. Study authors concluded that DEHP affects Leydig cell function and steroidogenesis. Reduced serum testosterone in offspring examined on PND 21 failed to stimulate an increase in serum LH concentrations. The LOAEL was 100 mg/kg/day based on changes in serum LH and testosterone. A NOAEL was not selected because only one dose was tested.	The study did not describe whether measures were taken to reduce contaminate exposure to plasticises in a study looking at reproductive and/or developmental endpoints. No details were provided for the preparation of the test substance; concentrations were not analytically verified, and the gavage volume was not reported. The study did not report using the litter as the experimental unit.	Reproductive/Development-al- Leydig cell testosterone production, serum testosterone and LH measurements, testicular histology and weight, seminal vesicles weight- Nutritional/Metabolic- Body weight and food consumption in dams and young adult rats; Medium	Akingbemi et-al 2001 673553

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
Non-guideline study, GLP not specified. Rat-Wistar - [rat]- Female	Oral-Gavage-Duration: Reproductive/Developmental- F0 - gestation (From GD 6)-F0- lactation (through LD 21) Offspring were exposed in utero through lactation from GD 6 until LD21	**POD: 1.215 mg/kg-bw/day (NOAEL) -Decreased sperm production** Dose= 0, Dose= 0.015, Dose= 0.045, Dose= 0.125, Dose= 0.405, Dose= 1.215, Dose= 5.0, Dose= 15.0, mg/kg-bw/day Female Exposure: F0 - gestation, From GD 6, F0- lactation, through LD 21	See footnotes for full summary [3]	This study was missing some details that could have a significant impact on the study results. It is not clear if the number of litters was equivalent to the number of treated dams. It is also unclear what the total number of male offspring were and whether the males used for mating experiments were the same males that were sacrificed at the end of the study, or if subsets of offspring were used for each endpoint. If the same animals were used, the mating status, and/or time since mating prior to sacrifice was not specified. The time of sacrifice was noted as a range (PND 144 ± 7 days), indicating that the time of sacrifice may have differed by up to a week between groups; this is expected to potentially have a significant impact on the results.	Reproductive/Developmental Note: The study conducted separate experiments, not all relevant reproductive/developmental endpoints were assessed in each experiment. Endpoints include: sperm parameters (production and morphology, sertoli cell number and leptotene spermatocyte to sertoli cell ratio), serum testosterone, male reproductive organ weights (testis, epididymis, seminal vescicles and prostate), criptochidism, histopathology and morphometry (testis) fertility and time to mating, and mating and pregnancy indices, sexual behavior, gross morphology of male reproductive organs. Fetal endpoints: Fetal weights, live/dead fetuses, implantation sites, resorptions, sex, external examinations.; Medium	Andrade et-al 2006 673565

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
Non-guideline study, GLP not specified. Rat-Wistar - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-F0 - gestation (From GD 6)-F0- lactation (through LD 21) Offspring were exposed in utero through lactation from GD 6 until LD21	**POD: 1.215 mg/kg-bw/day (NOAEL) -Decreased sperm production** Dose= 0, Dose= 0.015, Dose= 0.045, Dose= 0.125, Dose= 0.405, Dose= 1.215, Dose= 5.0, Dose= 15.0, mg/kg-bw/day Female Exposure: F0 - gestation, From GD 6, F0- lactation, through LD 21	See footnotes for full summary [4]	This study was missing some details that could have a significant impact on the study results. It is not clear if the number of litters was equivalent to the number of treated dams. It is also unclear what the total number of male offspring were and whether the males used for mating experiments were the same males that were sacrificed at the end of the study, or if subsets of offspring were used for each endpoint. If the same animals were used, the mating status, and/or time since mating prior to sacrifice was not specified. The time of sacrifice was noted as a range (PND 144 ± 7 days), indicating that the time of sacrifice may have differed by up to a week between groups; this is expected to potentially have a significant impact on the results.	Reproductive/Developmental Note: The study conducted separate experiments, not all relevant reproductive/developmental endpoints were assessed in each experiment. Endpoints include: sperm parameters (production and morphology, sertoli cell number and leptotene spermatocyte to sertoli cell ratio), serum testosterone, male reproductive organ weights (testis, epididymis, seminal vescicles and prostate), criptochidism, histopathology and morphometry (testis) fertility and time to mating, and mating and pregnancy indices, sexual behavior, gross morphology of male reproductive organs. Fetal endpoints: Fetal weights, live/dead fetuses, implantation sites, resorptions, sex, external examinations.; Medium	Andrade et-al 2006 673565

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

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Non-guideline study, GLP not specified. Rat-Wistar - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-F0 - gestation (From GD 6)-F0- lactation (through LD 21) Offspring were exposed in utero through lactation from GD 6 until LD21	**POD: 1.215 mg/kg-bw/day (NOAEL) -Decreased sperm production** Dose= 0, Dose= 0.015, Dose= 0.045, Dose= 0.125, Dose= 0.405, Dose= 1.215, Dose= 5.0, Dose= 15.0, mg/kg-bw/day Female Exposure: F0 - gestation, From GD 6, F0- lactation, through LD 21	See footnotes for full summary [5]	This study was missing some details that could have a significant impact on the study results. It is not clear if the number of litters was equivalent to the number of treated dams. It is also unclear what the total number of male offspring were and whether the males used for mating experiments were the same males that were sacrificed at the end of the study, or if subsets of offspring were used for each endpoint. If the same animals were used, the mating status, and/or time since mating prior to sacrifice was not specified. The time of sacrifice was noted as a range (PND 144 ± 7 days), indicating that the time of sacrifice may have differed by up to a week between groups; this is expected to potentially have a significant impact on the results.	Reproductive/Developmental Note: The study conducted separate experiments, not all relevant reproductive/developmental endpoints were assessed in each experiment. Endpoints include: sperm parameters (production and morphology, sertoli cell number and leptotene spermatocyte to sertoli cell ratio), serum testosterone, male reproductive organ weights (testis, epididymis, seminal vescicles and prostate), criptochidism, histopathology and morphometry (testis) fertility and time to mating, and mating and pregnancy indices, sexual behavior, gross morphology of male reproductive organs. Fetal endpoints: Fetal weights, live/dead fetuses, implantation sites, resorptions, sex, external examinations.; Medium	Andrade et-al 2006 673565

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
Non-guideline study, GLP not specified. Rat-Wistar - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (From GD 6)-F0- lactation (through PND 21) Offspring were exposed in Utero through lactation from GD6 to PND 21	**POD: 1.215 mg/kg-bw/day (NOAEL) -delayed preputial separation** n= 16 Dose= 0, n= 11 Dose= 0.015, n= 13 Dose= 0.045, n= 13 Dose= 0.135, n= 15 Dose= 0.405, n= 16 Dose= 1.215, n= 13 Dose= 5.0, n= 12 Dose= 15.0, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, From GD 6, F0- lactation, through PND 21	See footnotes for full summary [6]	This study lacks clarity. It does not clearly explain the differences in the purported number of dams dosed per group, There were large variations in the numbers of animals used to generate the data which leads to uncertainties regarding the possibility of select reporting. There were no details on the test substance preparation (timing and frequency) and storage. It was not clear when analytical measurements were made and if they were close to nominal. The purity was not provided in the study. It is assumed to be of high purity based on the supplier's website.	Reproductive/Developmental Developmental effects: number of live and dead pups, pup body weights, sex, general signs of toxicity, nipple retention, anogenital distance, age of testes decent, external examinations of reproductive organs for malformations, histopathology of the testes, liver and brain weights on PND1, liver, brain, testis and epididymis weights on PND 22.; Medium	Andrade et-al 2006 673567
No guideline is cited by the study authors, but the study design is similar to what is described in OECD TG 414. Rat-Wistar - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD 7-21)-F1- post-natal (PND 1-16) GD 7-21, PND 1-16 (in male offspring only)	**POD: 3 mg/kg-bw/day (LOAEL) -Increased incidence of mild external genital dysgenesis** n= 30 Dose= 0, n= 14 Dose= 3, n= 14 Dose= 10, n= 13 Dose= 30, n= 15 Dose= 100, n= 7 Dose= 300, n= 6 Dose= 600, n= 7 Dose= 900, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 7-21, F1- post-natal, PND 1-16	See footnotes for full summary [7]	There are some issues with using a higher gavage volume and lower sample size than what is typically recommended for these types of studies. There may also be some issues with the authors pooling results from different experiments together, given that results differed for several endpoints between the two experiments, however in all cases the authors do present data from both experiments together and separately when pooling the results. There is also the risk of minor attrition from animals that didn't bear litters, and the authors did not explain this observation.	Reproductive/Developmental Pregnancy length, live born per litter, post-implantation-perinatal loss, number of litters, anogenital distance (AGD) in males at birth, offspring body weight at PND day 23 (in males and females), number of nipples in males at PND day 12, external genital dysgenesis in males on PND 16, body and organ weights (prostate, testis, liver, kidney) in males at PND 16, histopathology and immunohistochemistry (testis); High	Christiansen et. al 2010 697341

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
The study did not report any compliance methods or if study was consistent with GLP conditions. Rat-Wistar - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD 14-18) Pregnant dams were exposed from GD 14-18	**POD: 100 mg/kg-bw/day (NOAEL) -Developmental. Decrease in ex vivo testosterone production from testes of fetal pups** n= 6 Dose= 0, n= 3 Dose= 100, n= 3 Dose= 300, n= 6 Dose= 500, n= 4 Dose= 625, n= 4 Dose= 750, n= 3 Dose= 875, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 14-18	Pregnant Wistar rats obtained from Charles River (3-6/group) were administered 0, 100, 300, 500, 625, 750, or 875 mg/kg-day of DEHP in corn oil via gavage on GDs 14-18. The methods did not specify whether animals were observed for mortality or clinical signs; however, these endpoints were recorded for animals exposed to other chemicals in the same study. Body weight gain of dams was assessed. Dams were sacrificed on GD 18 and fetal testes were collected for determination of ex vivo testicular testosterone production and changes in expression of StAR, CypllA, and Insl3 mRNA. The study did not report if any dams died during treatment. Maternal body weight was significantly decreased at $\geq$ 625 mg/kg/day. No fetal mortality was observed (data not shown). Ex vivo fetal testicular testosterone production was significantly decreased at $\geq$300 mg/kg/day (50% to 86%), compared to control. An ED50 of 347 mg/kg/day was determined for testosterone production. Significant decreases in mRNA levels of insl3 (at $\geq$500 mg/kg/day), and Cyp11a and StAR (at $\geq$500 mg/kg/day) were seen compared with controls. The ED50 for insl3 expression was 589 mg/kg-day. The ED50s for Cyp11a and StAR were 555 and 296 mg/kg-day, respectively. No author-reported toxicity values were provided. A maternal NOAEL of 500 mg/kg/day was determined based on decreased body weight changes in pregnant dams. A developmental NOAEL of 100 mg/kg/day was determined based on decreased testosterone produced from the testes ex vivo.	The number of dams per group is unclear, and there are discrepancies in the document. It is unknown if any dams died. The numbers reported on this form may not be accurate. Some groups contained a small number (n = 3/group)	Reproductive/Developmental-Male Reproductive - testosterone-Nutritional/Metabolic-Maternal body weight and body weight gain; Medium	Hannas et. al-2011 788239

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
The study did not report any compliance methods or if study was consistent with GLP conditions. Rat-Wistar - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD 14-18) Pregnant dams were exposed from GD 14-18	**POD: 100 mg/kg-bw/day (NOAEL) -Developmental. Decrease in ex vivo testosterone production from testes of fetal pups** n= 6 Dose= 0, n= 3 Dose= 100, n= 3 Dose= 300, n= 6 Dose= 500, n= 4 Dose= 625, n= 4 Dose= 750, n= 3 Dose= 875, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 14-18	Pregnant Wistar rats obtained from Charles River (3-6/group) were administered 0, 100, 300, 500, 625, 750, or 875 mg/kg-day of DEHP in corn oil via gavage on GDs 14-18. The methods did not specify whether animals were observed for mortality or clinical signs; however, these endpoints were recorded for animals exposed to other chemicals in the same study. Body weight gain of dams was assessed. Dams were sacrificed on GD 18 and fetal testes were collected for determination of ex vivo testicular testosterone production and changes in expression of StAR, CypllA, and Insl3 mRNA. The study did not report if any dams died during treatment. Maternal body weight was significantly decreased at $\geq$ 625 mg/kg/day. No fetal mortality was observed (data not shown). Ex vivo fetal testicular testosterone production was significantly decreased at $\geq$300 mg/kg/day (50% to 86%), compared to control. An ED50 of 347 mg/kg/day was determined for testosterone production. Significant decreases in mRNA levels of insl3 (at $\geq$500 mg/kg/day), and Cyp11a and StAR (at $\geq$500 mg/kg/day) were seen compared with controls. The ED50 for insl3 expression was 589 mg/kg-day. The ED50s for Cyp11a and StAR were 555 and 296 mg/kg-day, respectively. No author-reported toxicity values were provided. A maternal NOAEL of 500 mg/kg/day was determined based on decreased body weight changes in pregnant dams. A developmental NOAEL of 100 mg/kg/day was determined based on decreased testosterone produced from the testes ex vivo.	The number of dams per group is unclear, and there are discrepancies in the document. It is unknown if any dams died. The numbers reported on this form may not be accurate. Some groups contained a small number (n = 3/group)	Reproductive/Developmental-Male Reproductive - testosterone-Nutritional/Metabolic-Maternal body weight and body weight gain; Medium	Hannas et. al-2011 788239

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
The study did not report any compliance methods or if study was consistent with GLP conditions. Rat-Wistar - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD 14-18) Pregnant dams were exposed from GD 14-18	**POD: 100 mg/kg-bw/day (NOAEL) -Developmental. Decrease in ex vivo testosterone production from testes of fetal pups** n= 6 Dose= 0, n= 3 Dose= 100, n= 3 Dose= 300, n= 6 Dose= 500, n= 4 Dose= 625, n= 4 Dose= 750, n= 3 Dose= 875, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 14-18	Pregnant Wistar rats obtained from Charles River (3-6/group) were administered 0, 100, 300, 500, 625, 750, or 875 mg/kg-day of DEHP in corn oil via gavage on GDs 14-18. The methods did not specify whether animals were observed for mortality or clinical signs; however, these endpoints were recorded for animals exposed to other chemicals in the same study. Body weight gain of dams was assessed. Dams were sacrificed on GD 18 and fetal testes were collected for determination of ex vivo testicular testosterone production and changes in expression of StAR, CypllA, and Insl3 mRNA. The study did not report if any dams died during treatment. Maternal body weight was significantly decreased at $\geq$ 625 mg/kg/day. No fetal mortality was observed (data not shown). Ex vivo fetal testicular testosterone production was significantly decreased at $\geq$300 mg/kg/day (50% to 86%), compared to control. An ED50 of 347 mg/kg/day was determined for testosterone production. Significant decreases in mRNA levels of insl3 (at $\geq$500 mg/kg/day), and Cyp11a and StAR (at $\geq$500 mg/kg/day) were seen compared with controls. The ED50 for insl3 expression was 589 mg/kg-day. The ED50s for Cyp11a and StAR were 555 and 296 mg/kg-day, respectively. No author-reported toxicity values were provided. A maternal NOAEL of 500 mg/kg/day was determined based on decreased body weight changes in pregnant dams. A developmental NOAEL of 100 mg/kg/day was determined based on decreased testosterone produced from the testes ex vivo.	The number of dams per group is unclear, and there are discrepancies in the document. It is unknown if any dams died. The numbers reported on this form may not be accurate. Some groups contained a small number (n = 3/group)	Reproductive/Developmental-Male Reproductive - testosterone-Nutritional/Metabolic-Maternal body weight and body weight gain; Uninformative	Hannas et. al-2011 788239
The study was conducted according to OECD TG 414; EC Commission Directive 87/302/EEC of 18 November 1887; TSCA guidelines 40 CFR part 798.4900. The study was GLP compliant. Rat-Wistar - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD 6-15) Pregnant dams were dosed from GD6-15	**POD: 200 mg/kg-bw/day (NOAEL) - Increased incidences of fetal variations and skeletal retardations** n= 9 Dose= 0, n= 10 Dose= 40, n= 9 Dose= 200, n= 9 Dose= 1,000, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 6-15	See footnotes for full summary [8]	The test substance (purity) and methodological details were not included in the study. A small number of animals per group was utilized. The study did not include an appropriate window to adequately assess skeletal effects or effects on the male reproductive system.	Reproductive/Developmental-Reproductive: Uterus weight, corpora lutia/dam, implantations sites/dam, placental weight; Developmental: pre and post implantation loss, total resorptions, live fetuses, fetal weights, fetal and skeletal variations and malformations; Medium	Hellwig et. al-1997 674193

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
The study was conducted according to OECD TG 414; EC Commission Directive 87/302/EEC of 18 November 1887; TSCA guidelines 40 CFR part 798.4900. The study was GLP compliant. Rat-Wistar - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD 6-15) Pregnant dams were dosed from GD6-15	**POD: 200 mg/kg-bw/day (NOAEL) - Increased incidences of fetal variations and skeletal retardations** n= 9 Dose= 0, n= 10 Dose= 40, n= 9 Dose= 200, n= 9 Dose= 1,000, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 6-15	See footnotes for full summary [9]	The test substance (purity) and methodological details were not included in the study. A small number of animals per group was utilized. The study did not include an appropriate window to adequately assess skeletal effects or effects on the male reproductive system.	Reproductive/Developmental-Reproductive: Uterus weight, corpora lutia/dam, implantations sites/dam, placental weight; Developmental: pre and post implantation loss, total resorptions, live fetuses, fetal weights, fetal and skeletal variations and malformations; Medium	Hellwig et. al-1997 674193
No guidelines or adherence to GLP were specified. Mouse-CD-1 - [mouse]-Both	Oral-Diet-Duration: Reproductive/Developmental-1-F0- premating (7 days)-F0- mating (98 days)-F0 - gestation (21)-F0- premating (7 days)-F0- mating (98 days) Mice were exposed in the diet. Food was available ad libitum for the duration of the 7-day premating period, 98 day cohabitation period, and 21 days following mating	**POD: 0.01 % (in water or food) (NOAEL) -Based on the significant decreases in the number of litters/pair, the number of live pups/litter, the proportion of pups born alive, and live pup weights** n= 80 Dose= 0, n= 40 Dose= 0.01, n= 40 Dose= 0.1, n= 40 Dose= 0.3, % (in water or food)Total # of generations: 1 Male Exposure: F0- premating, 7 days, F0- mating, 98 days Female Exposure: F0- premating, 7 days, F0- mating, 98 days, F0 - gestation, 21	See footnotes for full summary [10]	The study did not adequately report body weights or food consumption despite being a dietary study. In addition, there was a shortened premating period and oestrous cyclicity was not reportedly examined in females.	Reproductive/Developmental-Organ weight (testis, epididymis, prostate, seminal vesicles, ovaries including the oviducts, uterus); Histopathology (testis, epididymis, prostate, seminal vesicles, ovary, oviduct, uterus, and vagina);Sperm parameters (percent of motile sperm, concentration and percentage of abnormal sperm);Mating and fertility indices (copulatory plug, number of fertile pairs/number cohabitated, litter/pair);F1: live pup body weight, sex ratio, proportion of pups born alive, number of live pups/litter; Medium	Lamb et. al-1987 61566

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
No guidelines or adherence to GLP were specified. Mouse-CD-1 - [mouse]-Both	Oral-Diet-Duration: Reproductive/Developmental-1-F0- premating (7 days)-F0- mating (98 days)-F0 - gestation (21)-F0- premating (7 days)-F0- mating (98 days) Mice were exposed in the diet. Food was available ad libitum for the duration of the 7-day premating period, 98 day cohabitation period, and 21 days following mating	**POD: 0.01 % (in water or food) (NOAEL) -Based on the significant decreases in the number of litters/pair, the number of live pups/litter, the proportion of pups born alive, and live pup weights** n= 80 Dose= 0, n= 40 Dose= 0.01, n= 40 Dose= 0.1, n= 40 Dose= 0.3, % (in water or food)Total # of generations: 1 Male Exposure: F0- premating, 7 days, F0- mating, 98 days Female Exposure: F0- premating, 7 days, F0- mating, 98 days, F0 - gestation, 21	See footnotes for full summary [11]	The study did not adequately report body weights or food consumption despite being a dietary study. In addition, there was a shortened premating period and oestrous cyclicity was not reportedly examined in females.	Reproductive/Developmental: Organ weight (testis, epididymis, prostate, seminal vesicles, ovaries including the oviducts, uterus); Histopathology (testis, epididymis, prostate, seminal vesicles, ovary, oviduct, uterus, and vagina);Sperm parameters (percent of motile sperm, concentration and percentage of abnormal sperm);Mating and fertility indices (copulatory plug, number of fertile pairs/number cohabitated, litter/pair);F1: live pup body weight, sex ratio, proportion of pups born alive, number of live pups/litter; Low	Lamb et. al 1987 61566

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
No guidelines or adherence to GLP were specified. Mouse-CD-1 - [mouse]-Both	Oral-Diet-Duration: Reproductive/Developmental-1-F0- premating (7 days)-F0- mating (98 days)-F0 - gestation (21)-F0- premating (7 days)-F0- mating (98 days) Mice were exposed in the diet. Food was available ad libitum for the duration of the 7-day premating period, 98 day cohabitation period, and 21 days following mating	**POD: 0.01 % (in water or food) (NOAEL) -Based on the significant decreases in the number of litters/pair, the number of live pups/litter, the proportion of pups born alive, and live pup weights** n= 80 Dose= 0, n= 40 Dose= 0.01, n= 40 Dose= 0.1, n= 40 Dose= 0.3, % (in water or food)Total # of generations: 1 Male Exposure: F0- premating, 7 days, F0- mating, 98 days Female Exposure: F0- premating, 7 days, F0- mating, 98 days, F0 - gestation, 21	See footnotes for full summary [12]	The study did not adequately report body weights or food consumption despite being a dietary study. In addition, there was a shortened premating period and oestrous cyclicity was not reportedly examined in females.	Reproductive/Developmental: Organ weight (testis, epididymis, prostate, seminal vesicles, ovaries including the oviducts, uterus); Histopathology (testis, epididymis, prostate, seminal vesicles, ovary, oviduct, uterus, and vagina);Sperm parameters (percent of motile sperm, concentration and percentage of abnormal sperm);Mating and fertility indices (copulatory plug, number of fertile pairs/number cohabitated, litter/pair);F1: live pup body weight, sex ratio, proportion of pups born alive, number of live pups/litter; Medium	Lamb et. al 1987 61566

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
No guidelines or adherence to GLP were specified. Mouse-CD-1 - [mouse]-Both	Oral-Diet-Duration: Reproductive/Developmental-1-F0- premating (7 days)-F0- mating (98 days)-F0 - gestation (21)-F0- premating (7 days)-F0- mating (98 days) Mice were exposed in the diet. Food was available ad libitum for the duration of the 7-day premating period, 98 day cohabitation period, and 21 days following mating	**POD: 0.01 % (in water or food) (NOAEL) -Based on the significant decreases in the number of litters/pair, the number of live pups/litter, the proportion of pups born alive, and live pup weights** n= 80 Dose= 0, n= 40 Dose= 0.01, n= 40 Dose= 0.1, n= 40 Dose= 0.3, % (in water or food)Total # of generations: 1 Male Exposure: F0- premating, 7 days, F0- mating, 98 days Female Exposure: F0- premating, 7 days, F0- mating, 98 days, F0 - gestation, 21	See footnotes for full summary [13]	The study did not adequately report body weights or food consumption despite being a dietary study. In addition, there was a shortened premating period and oestrous cyclicity was not reportedly examined in females.	Reproductive/Development- Organ weight (testis, epididymis, prostate, seminal vesicles, ovaries including the oviducts, uterus); Histopathology (testis, epididymis, prostate, seminal vesicles, ovary, oviduct, uterus, and vagina);Sperm parameters (percent of motile sperm, concentration and percentage of abnormal sperm);Mating and fertility indices (copulatory plug, number of fertile pairs/number cohabitated, litter/pair);F1: live pup body weight, sex ratio, proportion of pups born alive, number of live pups/litter; Medium	Lamb et. al 1987 61566
Non-guideline study; adherence to GLP was not specified. Rat-Long-Evans - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD2-20) Pregnant dams were dosed from GD2 to GD20	**POD: 10 mg/kg-bw/day (LOAEL) -Increased testosterone and changes in the frequency distribution of FLC clusters in male pups.** n= 6 Dose= 0, n= 6 Dose= 10, n= 6 Dose= 100, n= 9 Dose= 750, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD2-20	See footnotes for full summary [14]	Limited details were provided on the test material (e.g., purity) and methodology (e.g., whether measures to minimize the exposure to other plasticizers).	Reproductive/Development- Birth rates; number of pups per dam; sex ratio; male pup body weights (GD21); AGD (male pups); fetal testicular testosterone analysis; fetal Leydig cell numbers, size, and distribution; testicular gene expression; Leydig cell steroidogenic enzyme levels; testis weights; Low	Lin et. al 2008 698185

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
Non-guideline study; adherence to GLP was not specified. Rat-Long-Evans - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD2-20) Pregnant dams were dosed from GD2 to GD20	**POD: 10 mg/kg-bw/day (LOAEL) -Increased testosterone and changes in the frequency distribution of FLC clusters in male pups.** n= 6 Dose= 0, n= 6 Dose= 10, n= 6 Dose= 100, n= 9 Dose= 750, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD2-20	See footnotes for full summary [15]	Limited details were provided on the test material (e.g., purity) and methodology (e.g., whether measures to minimize the exposure to other plasticizers).	Reproductive/Development-Birth rates; number of pups per dam; sex ratio; male pup body weights (GD21); AGD (male pups); fetal testicular testosterone analysis; fetal Leydig cell numbers, size, and distribution; testicular gene expression; Leydig cell steroidogenic enzyme levels; testis weights; Medium	Lin et. al 2008 698185
No guidance documents were reported by the study authors Rat-Long-Evans - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD 12.5-GD20)-F0- lactation (PND 0-PND 21) Pregnant dams exposed from GD 12.5-PND 21	**POD: 10 mg/kg-bw/day (LOAEL) -Decreased serum testosterone levels and increased Leydig cell distribution in male offspring.** n= 11 Dose= 0, n= 12 Dose= 10, n= 13 Dose= 750, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 12.5-GD20, F0- lactation, PND 0-PND 21	See footnotes for full summary [16]	There is a lack of reporting of important information, such as test substance purity or animal housing conditions. Additionally, there is the strong possibility that authors did not use the litter as the unit of sampling and there may also be either high yet unexplained animal attrition in the pups, or the authors may not have measured/reported outcomes for all animals.	Reproductive/Development-Birth rate in dams and number of pups per dam. Endpoints assessed in pups: male:female ratio, anogenital distance (AGD) at PND2, body weight at PND35 and 49, testes and prostate weight at PND49, Leydig cell histopathology (average, median and maximum number of cells per cluster), testes mRNA expression, protein expression and enzyme activity, serum testosterone levels (PND 21 and 49).-Nutritional/Metabolic-Maternal body weights (GD 12 and GD 20 and GD 21.5); Low	Lin et. al 2009 697737

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
None reported Rat-Wistar - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD 9-21)-F0- lactation (PND 1-21) Exposure occurred from GD 9 to PND 21 (lactation period)	**POD: 10 mg/kg/day (LOAEL) -Altered glucoregulatory events and impaired insulin signal transduction in F1 male offspring** n= 6 Dose= 0, n= 6 Dose= 10, n= 6 Dose= 100, mg/kg/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 9-21, F0- lactation, PND 1-21	See footnotes for full summary [17]	The source of the animals was not reported. Only 6 dams per group were tested, and only male F1 offspring per litter were evaluated without justification. This was a focused study that was primarily mechanistic in nature and therefore had a limited scope of relevant systemic endpoints	Reproductive/Developmental-F1 males: blood glucose, serum insulin, insulin resistance, body weight, serum AST, ALT, ALP; hepatic glycogen concentration; enzymatic activity (i.e., glycogen synthase; glucose-6-phosphatase; phosphoenolpyruvate carboxykinase); protein expression (i.e., Beta-arrestin; c-Src; phosphorylated/non-phosphorylated IR-beta, IRS-1, AKT, FoxO1, GSK3beta); mRNA levels (i.e., glucose-6-phosphatase; phosphoenolpyruvate carboxykinase); transcription factor FoxO1 interaction with gene promoters glucose-6-phosphatase and phosphoenolpyruvate carboxykinase; serum urea, creatinine, testosterone and estradiol.; Medium	Rajagopal et-al 2019 5507636

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
Non-guideline study; adherence to GLP not specified. Rat-Wistar - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD 9-21) In utero exposure, daily, from GD9-21	**POD: 1 mg/kg-bw/day (LOAEL) - Decreased lean body weight, increased fat weight, increased fasting blood glucose, decreased fasting insulin.** n= 6 Dose= 0, n= 6 Dose= 1, n= 6 Dose= 10, n= 6 Dose= 100, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 9-21	See footnotes for full summary [18]	The dose selection did not allow for the determination of a NOAEL.	Nutritional/Metabolic-Apical endpoints: Lean body weight, fat weight, fasting blood glucose and insulin levels. Mechanistic endpoints: gene expression, epigenetic modification (DNA methylation, ChIP), protein levels (Western, immunohistochemistry) of molecules involved in insulin signalling and glucose regulation.; Medium	Rajesh et. al 2014 2519077
No guidelines or adherence to GLP were specified. Mouse-CD-1 - [mouse]-Both	Oral-Diet-Duration: Reproductive/Developmental-1-F0- premating (4 weeks)-F0- mating (5 days)-F0 - gestation (14 days)-F0- lactation (4 weeks)-F1- post-natal-F0- premating (4 weeks)-F0- mating (5 days)-F1- post-natal Food was available ad libitum	**POD: 40.02 mg/kg-bw/day (NOAEL) -Significant delay in surface righting** n= 20 Dose= 0, n= 20 Dose= 14.67, n= 20 Dose= 40.02, n= 20 Dose= 125.77, mg/kg-bw/dayTotal # of generations: 1 Male Exposure: F0- premating, 4 weeks, F0- mating, 5 days, F1- post-natal Female Exposure: F0- premating, 4 weeks, F0- mating, 5 days, F0 - gestation, 14 days, F0- lactation, 4 weeks, F1- post-natal	See footnotes for full summary [19]	Concentration in the food was not analytically measured. The pup instead of the litter was used as the statistical unit.	Reproductive/Developmental-Repro - mating and fertility (number of females pregnant, number of females that delivered, number of litters/group. number of offspring, average litter size, average litter weight); Dev - survival Index, live pup body weight, sex ratio, neurobehavioral endpoints surface righting and negative geotaxis tests (PNDs 4 and 7); cliff avoidance was tested (PND 7); swimming behavior (PNDs 4 and 14); olfactory orientation (PND 14); exploratory behavior (week 3 and 8 weeks); and water T-maze test (week 7), body weight and food intake after weaning.; Medium	Tanaka et. al- 2002 732820

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
No guidelines or adherence to GLP were specified. Mouse-CD-1 - [mouse]-Both	Oral-Diet-Duration: Reproductive/Developmental-1-F0- premating (4 weeks)-F0- mating (5 days)-F0 - gestation (14 days)-F0- lactation (4 weeks)-F1- post-natal-F0- premating (4 weeks)-F0- mating (5 days)-F1- post-natal Food was available ad libitum	**POD: 40.02 mg/kg-bw/day (NOAEL) -Significant delay in surface righting** n= 20 Dose= 0, n= 20 Dose= 14.67, n= 20 Dose= 40.02, n= 20 Dose= 125.77, mg/kg-bw/dayTotal # of generations: 1 Male Exposure: F0- premating, 4 weeks, F0- mating, 5 days, F1- post-natal Female Exposure: F0- premating, 4 weeks, F0- mating, 5 days, F0 - gestation, 14 days, F0- lactation, 4 weeks, F1- post-natal	See footnotes for full summary [20]	Concentration in the food was not analytically measured. The pup instead of the litter was used as the statistical unit.	Reproductive/Developmental-Repro - mating and fertility (number of females pregnant, number of females that delivered, number of litters/group. number of offspring, average litter size, average litter weight); Dev - survival Index, live pup body weight, sex ratio, neurobehavioral endpoints surface righting and negative geotaxis tests (PNDs 4 and 7); cliff avoidance was tested (PND 7); swimming behavior (PNDs 4 and 14); olfactory orientation (PND 14); exploratory behavior (week 3 and 8 weeks); and water T-maze test (week 7), body weight and food intake after weaning.; Medium	Tanaka et. al-2002 732820

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
No guideline was specified; the study was GLP compliant. Rat-Sprague-Dawley - [rat]-Both	Oral-Diet-Duration: Reproductive/Developmental-1-F0- premating (1 week)-F0- mating (cohabitation for 28 days)-F0 - gestation (time not specified)-F0-lactation (21 days)-F0-premating (1 week)-F0-mating (cohabitation for 28 days) Task 1 (range finding): Males and females were dosed from one week prior to mating, through mating, gestation, and lactation and were sacrificed on PND21	**POD: 321.42 mg/kg-bw/day (LOAEL) -decreased uterus/cervix/and vagina weights in female offspring** n= 16 Dose= 0, n= 16 Dose= 321.42, n= 16 Dose= 643.95, mg/kg-bw/dayTotal # of generations: 1 Male Exposure: F0-premating, 1 week, F0- mating, cohabitation for 28 days Female Exposure: F0- premating, 1 week, F0- mating, cohabitation for 28 days, F0 - gestation, time not specified, F0- lactation, 21 days	See footnotes for full summary [21]	Range-finding study that used fewer breeding pairs than guideline recommendations for a reproductive study.	Reproductive/Developmental: Reproductive and developmental parameters from: F0 (F1a, F1b, F1c), F1 (F2a, F2b, F2c), F2 (F3a, F3b, F3c) matings (litters), and from F1c and F2c crossover mating experiments. Endpoints include reproductive performance, standard litter parameters, growth and reproductive development of offspring (e.g., preputial separation, testis decent, vaginal opening), and reproductive tract malformations (RTMs). Reproductive organ weights of adults, estrous cyclicity, sperm parameters, gross observations.; High	TherImmune Research Corporation, 2004 3108900

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
No guideline was specified; the study was GLP compliant. Rat-Sprague-Dawley - [rat]-Both	Oral-Diet-Duration: Reproductive/Developmental-1-F0- premating (1 week)-F0- mating (cohabitation for 28 days)-F0 - gestation (time not specified)-F0-lactation (21 days)-F0-premating (1 week)-F0-mating (cohabitation for 28 days) Task 1 (range finding): Males and females were dosed from one week prior to mating, through mating, gestation, and lactation and were sacrificed on PND21	**POD: 321.42 mg/kg-bw/day (LOAEL) -decreased uterus/cervix/and vagina weights in female offspring** n= 16 Dose= 0, n= 16 Dose= 321.42, n= 16 Dose= 643.95, mg/kg-bw/dayTotal # of generations: 1 Male Exposure: F0-premating, 1 week, F0- mating, cohabitation for 28 days Female Exposure: F0- premating, 1 week, F0- mating, cohabitation for 28 days, F0 - gestation, time not specified, F0- lactation, 21 days	See footnotes for full summary [22]	Range-finding study that used fewer breeding pairs than guideline recommendations for a reproductive study.	Reproductive/Developmental: Reproductive and developmental parameters from: F0 (F1a, F1b, F1c), F1 (F2a, F2b, F2c), F2 (F3a, F3b, F3c) matings (litters), and from F1c and F2c crossover mating experiments. Endpoints include reproductive performance, standard litter parameters, growth and reproductive development of offspring (e.g., preputial separation, testis decent, vaginal opening), and reproductive tract malformations (RTMs). Reproductive organ weights of adults, estrous cyclicity, sperm parameters, gross observations.; Medium	TherImmune Research Corporation, 2004 3108900

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
No guideline was specified, the study was GLP compliant. Rat-Sprague-Dawley - [rat]-Both	Oral-Diet-Duration: Reproductive/Developmental-3-F0- premating (6 weeks)-F0- mating (9 weeks cohabitation)-F0 - gestation (~21 days)-F0- lactation (21 days)-F1- premating (~60 days (PND21 to PND81))-F1- mating (9 weeks cohabitation)-F1 - gestation (~21 days)-F1- lactation (21 days)-F1- post-natal (weaning through necropsy)-F2- premating (~60 days (PND21 to PND81))-F2- mating (9 weeks cohabitation)-F2 - gestation (~21 days)-F2- lactation (21 days)-F2- post-natal (weaning through necropsy)-F0- premating (6 weeks)-F0- mating (9 weeks cohabitation)-F1- premating (~60 days (PND21 to PND81))-F1- mating (9 weeks cohabitation)-F1- post-natal (weaning through necropsy)-F2- premating (~60 days (PND21 to PND81))-F2- mating (9 weeks cohabitation)-F2- post-natal (weaning through necropsy) Continuous breeding study: F0 animals were dosed starting 6 weeks prior to mating and were cohabitated for 9 weeks to generate F1a, F1b, and F1c litters. Dosing of F0 animals continued through lactation of the F1c litter for a total of ~26 weeks. F1a and F1b litters were exposed in utero only (sacrificed on PND1). F1c litters were exposed in utero and during lactation and were dosed via the diet from weaning (PND21) until necropsy (PND 63-34 (males) or PND 74 (fe-	**POD: 77 ppm (in air, water, or food) (BMDL) -Increase in reproductive tract malformations in male offspring** n= 68 Dose= 1.5, n= 34 Dose= 10, n= 34 Dose= 30, n= 34 Dose= 100, n= 34 Dose= 300, n= 34 Dose= 1,000, n= 34 Dose= 7,500, n= 34 Dose= 10,000, ppm (in air, water, or food)Total # of generations: 3 Male Exposure: F0- premating, 6 weeks, F0- mating, 9 weeks cohabitation, F1- premating, ~60 days (PND21 to PND81), F1- mating, 9 weeks cohabitation, F1- post-natal, weaning through necropsy, F2- premating, ~60 days (PND21 to PND81), F2- mating, 9 weeks cohabitation, F2- post-natal, weaning through necropsy Female Exposure: F0- premating, 6 weeks, F0- mating, 9 weeks cohabitation, F0 - gestation, ~21 days, F0- lactation, 21 days, F1- premating, ~60 days (PND21 to PND81), F1- mating, 9 weeks cohabitation,	See footnotes for full summary [23]	No significant limitations were identified, although OECD guidelines specify enough breeding pairs to generate 20 litters.	Mortality-Mortality-Nutritional/Metabolic-Adult body weights, food and water consumption-Reproductive/Developmental-Reproductive and developmental parameters from: F0 (F1a, F1b, F1c), F1 (F2a, F2b, F2c), F2 (F3a, F3b, F3c) matings (litters), and from F1c and F2c crossover mating experiments. Endpoints include reproductive performance, standard litter parameters, growth and reproductive development of offspring (e.g., preputial separation, testis decent, vaginal opening), and reproductive tract malformations (RTMs). Reproductive organ weights of adults, estrous cyclicity, sperm parameters, gross observations.-Hepatic/Liver-Liver weights, gross necropsy, histopathology-Renal/Kidney-Kidney weights, gross necropsy, histopathology (including the bladder); High	TherImmune Research Corporation, 2004 3108900

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
No guideline was specified, the study was GLP compliant. Rat-Sprague-Dawley - [rat]-Both	Oral-Diet-Duration: Reproductive/Developmental-3-F0- premating (6 weeks)-F0- mating (9 weeks cohabitation)-F0 - gestation (~21 days)-F0- lactation (21 days)-F1- premating (~60 days (PND21 to PND81))-F1- mating (9 weeks cohabitation)-F1 - gestation (~21 days)-F1- lactation (21 days)-F1- post-natal (weaning through necropsy)-F2- premating (~60 days (PND21 to PND81))-F2- mating (9 weeks cohabitation)-F2 - gestation (~21 days)-F2- lactation (21 days)-F2- post-natal (weaning through necropsy)-F0- premating (6 weeks)-F0- mating (9 weeks cohabitation)-F1- premating (~60 days (PND21 to PND81))-F1- mating (9 weeks cohabitation)-F1- post-natal (weaning through necropsy)-F2- premating (~60 days (PND21 to PND81))-F2- mating (9 weeks cohabitation)-F2- post-natal (weaning through necropsy) Continuous breeding study: F0 animals were dosed starting 6 weeks prior to mating and were cohabitated for 9 weeks to generate F1a, F1b, and F1c litters. Dosing of F0 animals continued through lactation of the F1c litter for a total of ~26 weeks. F1a and F1b litters were exposed in utero only (sacrificed on PND1). F1c litters were exposed in utero and during lactation and were dosed via the diet from weaning (PND21) until necropsy (PND 63-34 (males) or PND 74 (fe-	**POD: 77 ppm (in air, water, or food) (BMDL) -Increase in reproductive tract malformations in male offspring** n= 68 Dose= 1.5, n= 34 Dose= 10, n= 34 Dose= 30, n= 34 Dose= 100, n= 34 Dose= 300, n= 34 Dose= 1,000, n= 34 Dose= 7,500, n= 34 Dose= 10,000, ppm (in air, water, or food)Total # of generations: 3 Male Exposure: F0- premating, 6 weeks, F0- mating, 9 weeks cohabitation, F1- premating, ~60 days (PND21 to PND81), F1- mating, 9 weeks cohabitation, F1- post-natal, weaning through necropsy, F2- premating, ~60 days (PND21 to PND81), F2- mating, 9 weeks cohabitation, F2- post-natal, weaning through necropsy Female Exposure: F0- premating, 6 weeks, F0- mating, 9 weeks cohabitation, F0 - gestation, ~21 days, F0- lactation, 21 days, F1- premating, ~60 days (PND21 to PND81), F1- mating, 9 weeks cohabitation,	See footnotes for full summary [24]	No significant limitations were identified, although OECD guidelines specify enough breeding pairs to generate 20 litters.	Mortality-Mortality-Nutritional/Metabolic-Adult body weights, food and water consumption-Reproductive/Development-Reproductive and developmental parameters from: F0 (F1a, F1b, F1c), F1 (F2a, F2b, F2c), F2 (F3a, F3b, F3c) matings (litters), and from F1c and F2c crossover mating experiments. Endpoints include reproductive performance, standard litter parameters, growth and reproductive development of offspring (e.g., preputial separation, testis decent, vaginal opening), and reproductive tract malformations (RTMs). Reproductive organ weights of adults, estrous cyclicity, sperm parameters, gross observations.-Hepatic/Liver-Liver weights, gross necropsy, histopathology-Renal/Kidney-Kidney weights, gross necropsy, histopathology (including the bladder); High	TherImmune Research Corporation, 2004 3108900

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
Adherence to a guideline was not specified. Rat-Sprague-Dawley - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD 11-21) Dams were exposed daily via gavage from GD 11 to 21	**POD: 10 mg/kg-bw/day (LOAEL) -Significantly reduced sperm motility.** n= 8 Dose= 0, n= 8 Dose= 10, n= 8 Dose= 100, n= 8 Dose= 500, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 11-21	See footnotes for full summary [25]	Major limitations of this study included missing important information (starting body weight, general animal husbandry conditions, and purity of test substance), the potential for phthalate contamination in the cage environment, missing results for some endpoints (maternal endpoints, number of male fetuses, offspring body weights on PND 1, male-female ratio of litters, male offspring body weights measured weekly from PND 1-63, and a missing table (Table 4-d). There were limited details on chemical administration and characterization, and uncertainty surrounding the sample sizes for several endpoints.	Reproductive/Development: GD21 Sacrifice:Number of male fetuses, Average male fetus body weight, Androgen receptor expression in testes by immunohistochemistry analysis, Serum testosterone and LH levels, Gene expression in testes (cDNA microarray and RT–PCR).PND 63 Sacrifice:Litter size, Offspring body weight (PND 1), Male-female ratio, Male offspring body weights (measured weekly from PND 1-63), Male offspring body weights (on PND 63), Male offspring clinical signs, Number of areolae/male offspring, Anogenital distance of male offspring, Organ weights of male offspring (testis, epididymis, prostate), Sperm concentration of male offspring, Sperm motility and viability of male offspring, Androgen receptor expression in testes by immunohistochemistry analysis, Serum testosterone and LH levels.; Low	Vo et. al 2009 697710

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID
Adherence to a guideline was not specified. Rat-Sprague-Dawley - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD 11-21) Dams were exposed daily via gavage from GD 11 to 21	**POD: 10 mg/kg-bw/day (LOAEL) -Significantly reduced sperm motility.** n= 8 Dose= 0, n= 8 Dose= 10, n= 8 Dose= 100, n= 8 Dose= 500, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 11-21	See footnotes for full summary [26]	Major limitations of this study included missing important information (starting body weight, general animal husbandry conditions, and purity of test substance), the potential for phthalate contamination in the cage environment, missing results for some endpoints (maternal endpoints, number of male fetuses, offspring body weights on PND 1, male-female ratio of litters, male offspring body weights measured weekly from PND 1-63, and a missing table (Table 4-d). There were limited details on chemical administration and characterization, and uncertainty surrounding the sample sizes for several endpoints.	Reproductive/Developmental: GD21 Sacrifice:Number of male fetuses, Average male fetus body weight, Androgen receptor expression in testes by immunohistochemistry analysis, Serum testosterone and LH levels, Gene expression in testes (cDNA microarray and RT–PCR).PND 63 Sacrifice:Litter size, Offspring body weight (PND 1), Male-female ratio, Male offspring body weights (measured weekly from PND 1-63), Male offspring body weights (on PND 63), Male offspring clinical signs, Number of areolae/male offspring, Anogenital distance of male offspring, Organ weights of male offspring (testis, epididymis, prostate), Sperm concentration of male offspring, Sperm motility and viability of male offspring, Androgen receptor expression in testes by immunohistochemistry analysis, Serum testosterone and LH levels.; Uninformative	Vo et. al 2009 697710

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Diethylhexyl Phthalate- Parent compound - Reproductive/Developmental

Guideline and Animal Species, Strain, Sex	Exposure Route and Exposure Duration	Study-wide POD and Dose/ Concentration(s)	Summary	Major Limitations	Principal Target Organs/Systems and OQD*	HERO ID

* Overall Quality Determination

[1] 673553: In a gestational exposure study, timed pregnant Long Evans rats (7 females/group) were administered DEHP in corn oil via oral gavage at doses of 0 (vehicle only) or 100 mg/kg-bw/day on GD 12-21. Females were allowed to litter. Male offspring were randomly collected from every dam. Body weights were measured for dams at the beginning and end of the experiment. Body weights of offspring were measured on days 21, 35, and 90. Food intake was measured for all groups. The testes and seminal vesicles (with coagulating glands) were weighed on days 21, 35, and 90. Serum hormone levels (testosterone and LH) and Leydig cell testosterone production (basal and LH-stimulated) were measured on days 21, 35, and 90. Histological evaluations were conducted on the testes. There were no effects on body weights in dams or offspring at any time point. Weights of testes and seminal vesicles were comparable to controls. Significant decreases in serum testosterone levels were observed at 21 and 35 days in treated offspring with an associated decrease in serum LH concentrations. There were no significant differences in groups examined on PND 90. Leydig cell testosterone production (basal and LH-stimulated) was significantly decreased on PND 21 but not PND 35 or 90. Histology showed no evidence of Leydig cell hyperplasia, seminiferous tubule damage, germ cell degeneration, or delayed spermiation in any group. Study authors concluded that DEHP affects Leydig cell function and steroidogenesis. Prenatal exposure to DEHP inhibited Leydig cell testosterone production by suppressing pituitary function based on the decreased serum LH levels in offspring examined on PNDs 21 and 35 and reducing steroidogenic enzyme activity. The LOAEL was 100 mg/kg/day based on changes in serum LH and testosterone. A NOAEL was not selected because only one dose was tested.

[2] 673553: In a gestational exposure study, timed pregnant Long Evans rats (7 females/group) were administered DEHP in corn oil via oral gavage at doses of 0 (vehicle only) or 100 mg/kg-bw/day on GD 12-21. Females were allowed to litter. Male offspring were randomly collected from every dam. Body weights were measured for dams at the beginning and end of the experiment. Body weights of offspring were measured on days 21, 35, and 90. Food intake was measured for all groups. The testes and seminal vesicles (with coagulating glands) were weighed on days 21, 35, and 90. Serum hormone levels (testosterone and LH) and Leydig cell testosterone production (basal and LH-stimulated) were measured on days 21, 35, and 90. Histological evaluations were conducted on the testes. There were no effects on body weights in dams or offspring at any time point. Weights of testes and seminal vesicles were comparable to controls. Significant decreases in serum testosterone levels were observed at 21 and 35 days in treated offspring with an associated decrease in serum LH concentrations. There were no significant differences in groups examined on PND 90. Leydig cell testosterone production (basal and LH-stimulated) was significantly decreased on PND 21 but not PND 35 or 90. Histology showed no evidence of Leydig cell hyperplasia, seminiferous tubule damage, germ cell degeneration, or delayed spermiation in any group. Study authors concluded that DEHP affects Leydig cell function and steroidogenesis. Prenatal exposure to DEHP inhibited Leydig cell testosterone production by suppressing pituitary function based on the decreased serum LH levels in offspring examined on PNDs 21 and 35 and reducing steroidogenic enzyme activity. The LOAEL was 100 mg/kg/day based on changes in serum LH and testosterone. A NOAEL was not selected because only one dose was tested.

[3] 673565: In a study focused on evaluating the effects of in-utero and lactational exposure on male reproductive effects, Gravid female Wistar (HsdCpb:WU) rats were administered DEHP (purity not specified, but presumed to be ≥98%), via gavage, at doses of 0 (vehicle), 0.015, 0.045, 0.125, 0.405, 1.215, 5, 15, 45, 135, and 405 mg/kg-day, from GD6 through lactation day or postnatal day (PND) 21, using a peanut oil vehicle. The number of dams dosed was not clearly specified but resulted in 11 to 16 litters per group. The dams were not observed for any effects, the study was focused only on evaluating effects in the male offspring. After weaning, male offspring were left untreated. At ~110 days of age, 16-18 males per group (representing all litters) were mated with unexposed females for 3 hrs/day for 14 days. Time to mating and mating and pregnancy indices were calculated. These pregnant dams were sacrificed on GD 21, and fetal weights, numbers of live and dead fetuses, implantation sites, and resorptions were recorded. On PND 130 (n = 14-17 per group), experienced male offspring were mated with unexposed females for 20 minutes to assess sexual behavior. On PND 144 ± 7 days, adult males (19 -20 per group) were sacrificed. Body weights and the testes, epididymides, ventral prostate, seminal vesicles, liver, kidney, spleen, and thymus weights were recorded. Serum testosterone levels were measured. Reproductive organs were grossly examined. Other endpoints included calculations of daily sperm production, testicular histopathology and morphometry (of macroscopically normal testes), cell counts of Sertoli cells and determination of leptotene spermatocyte to Sertoli cell ratio. It is unclear whether the males sacrificed on PND 144 were the same offspring used for the mating experiments, if they were a separate subset of unmated males, or if there was consistency in mating history across groups. It is unclear what dictated the ranges of offspring used for each set of outcomes. In all cases, the litter was used as the experimental unit for statistical analysis. The first mating/fertility experiment showed no differences in reproductive function between treated and untreated male offspring. There were also no changes in F2 fetuses generated from treated sires, compared with those from controls. There were also no significant changes in sexual behavior except for a sling decrease in mounting latency in the 5 and 15 mg/kg-day groups. At sacrifice, there were no significant differences in body weights or in non-reproductive organ weights. The weight of seminal vesicles was significantly decreased at 405 mg/kg-day, and serum testosterone levels in the same group were significantly increased by more than two times above controls. Serum testosterone was also slightly increased in the 0.045 and 0.405 mg/kg-day groups. The ventral prostate was reduced at the high dose, but the change did not reach statistical significance. Some macroscopic changes described in the text (small scrotal testes in 1 in control one at 405 mg/kg-day, undescended testes, one each, at 5, 135, and 405 mg/kg-day, and small epididymides at 405 mg/kg-day) were observed at low incidences. Cryptorchidism was unexpected and had not been observed in a total of 133 control rats used by the performing laboratory. Histopathological analysis of these macroscopically altered tissues showed (but were not limited to) reduced spermatogenesis, reduction of germ cells, desquamation of enlarged cells with multinuclei, and atrophic tubules. In macroscopically normal testes, histopathological lesions were observed in 3/9 testes examined in the 405 mg/kg-day group. Two testes showed single seminiferous tubules with reduced germ cell layers and loss of stratification, and slight focal Leydig cell hyperplasia in the third testes (this animal also had high serum testosterone). Daily sperm production was significantly decreased at ≥ 0.045 mg/kg-day, although when compared with the provided historical control data, the increases were significant only at 15, 135, and 405 mg/kg-day (but not at 45 mg/kg-day). The study authors did not consider the changes in the lower dose groups to be biologically relevant. Sperm morphological analysis showed an increase in abnormal sperm only at 0.045 mg/kg-day, compared to concurrent controls. The author reported NOAEL was 1.215 mg/kg-day and LOAEL was 5 mg/kg-day based on the reduction of daily sperm production, in the absence of an effect on reproductive function.

[4] 673565: In a study focused on evaluating the effects of in-utero and lactational exposure on male reproductive effects, Gravid female Wistar (HsdCpb:WU) rats were administered DEHP (purity not specified, but presumed to be ≥98%), via gavage, at doses of 0 (vehicle), 0.015, 0.045, 0.125, 0.405, 1.215, 5, 15, 45, 135, and 405 mg/kg-day, from GD6 through lactation day or postnatal day (PND) 21, using a peanut oil vehicle. The number of dams dosed was not clearly specified but resulted in 11 to 16 litters per group. The dams were not observed for any effects, the study was focused only on evaluating effects in the male offspring. After weaning, male offspring were left untreated. At ~110 days of age, 16-18 males per group (representing all litters) were mated with unexposed females for 3 hrs/day for 14 days. Time to mating and mating and pregnancy indices were calculated. These pregnant dams were sacrificed on GD 21, and fetal weights, numbers of live and dead fetuses, implantation sites, and resorptions were recorded. On PND 130 (n = 14-17 per group), experienced male offspring were mated with unexposed females for 20 minutes to assess sexual behavior. On PND 144 ± 7 days, adult males (19 -20 per group) were sacrificed. Body weights and the testes, epididymides, ventral prostate, seminal vesicles, liver, kidney, spleen, and thymus weights were recorded. Serum testosterone levels were measured. Reproductive organs were grossly examined. Other endpoints included calculations of daily sperm production, testicular histopathology and morphometry (of macroscopically normal testes), cell counts of Sertoli cells and determination of leptotene spermatocyte to Sertoli cell ratio. It is unclear whether the males sacrificed on PND 144 were the same offspring used for the mating experiments, if they were a separate subset of unmated males, or if there was consistency in mating history across groups. It is unclear what dictated the ranges of offspring used for each set of outcomes. In all cases, the litter was used as the experimental unit for statistical analysis. The first mating/fertility experiment showed no differences in reproductive function between treated and untreated male offspring. There were also no changes in F2 fetuses generated from treated sires, compared with those from controls. There were also no significant changes in sexual behavior except for a sling decrease in mounting latency in the 5 and 15 mg/kg-day groups. At sacrifice, there were no significant differences in body weights or in non-reproductive organ weights. The weight of seminal vesicles was significantly decreased at 405 mg/kg-day, and serum testosterone levels in the same group were significantly increased by more than two times above controls. Serum testosterone was also slightly increased in the 0.045 and 0.405 mg/kg-day groups. The ventral prostate was reduced at the high dose, but the change did not reach statistical significance. Some macroscopic changes described in the text (small scrotal testes in 1 in control one at 405 mg/kg-day, undescended testes, one each, at 5, 135, and 405 mg/kg-day, and small epididymides at 405 mg/kg-day) were observed at low incidences. Cryptorchidism was unexpected and had not been observed in a total of 133 control rats used by the performing laboratory. Histopathological analysis of these macroscopically altered tissues showed (but were not limited to) reduced spermatogenesis, reduction of germ cells, desquamation of enlarged cells with multinuclei, and atrophic tubules. In macroscopically normal testes, histopathological lesions were observed in 3/9 testes examined in the 405 mg/kg-day group. Two testes showed single seminiferous tubules with reduced germ cell layers and loss of stratification, and slight focal Leydig cell hyperplasia in the third testes (this animal also had high serum testosterone). Daily sperm production was significantly decreased at ≥ 0.045 mg/kg-day, although when compared with the provided historical control data, the increases were significant only at 15, 135, and 405 mg/kg-day (but not at 45 mg/kg-day). The study authors did not consider the changes in the lower dose groups to be biologically relevant. Sperm morphological analysis showed an increase in abnormal sperm only at 0.045 mg/kg-day, compared to concurrent controls. The author reported NOAEL was 1.215 mg/kg-day and LOAEL was 5 mg/kg-day based on the reduction of daily sperm production, in the absence of an effect on reproductive function.

[5] 673565: In a study focused on evaluating the effects of in-utero and lactational exposure on male reproductive effects, Gravid female Wistar (HsdCpb:WU) rats were administered DEHP (purity not specified, but presumed to be ≥98%), via gavage, at doses of 0 (vehicle), 0.015, 0.045, 0.125, 0.405, 1.215, 5, 15, 45, 135, and 405 mg/kg-day, from GD6 through lactation day or postnatal day (PND) 21, using a peanut oil vehicle. The number of dams dosed was not clearly specified but resulted in 11 to 16 litters per group. The dams were not observed for any effects, the study was focused only on evaluating effects in the male offspring. After weaning, male offspring

were left untreated. At ~110 days of age, 16-18 males per group (representing all litters) were mated with unexposed females for 3 hrs/day for 14 days. Time to mating and mating and pregnancy indices were calculated. These pregnant dams were sacrificed on GD 21, and fetal weights, numbers of live and dead fetuses, implantation sites, and resorptions were recorded. On PND 130 (n = 14-17 per group), experienced male offspring were mated with unexposed females for 20 minutes to assess sexual behavior. On PND 144 $\pm$ 7 days, adult males (19 -20 per group) were sacrificed. Body weights and the testes, epididymides, ventral prostate, seminal vesicles, liver, kidney, spleen, and thymus weights were recorded. Serum testosterone levels were measured. Reproductive organs were grossly examined. Other endpoints included calculations of daily sperm production, testicular histopathology and morphometry (of macroscopically normal testes), cell counts of Sertoli cells and determination of leptotene spermatocyte to Sertoli cell ratio. It is unclear whether the males sacrificed on PND 144 were the same offspring used for the mating experiments, if they were a separate subset of unmated males, or if there was consistency in mating history across groups. It is unclear what dictated the ranges of offspring used for each set of outcomes. In all cases, the litter was used as the experimental unit for statistical analysis. The first mating/fertility experiment showed no differences in reproductive function between treated and untreated male offspring. There were also no changes in F2 fetuses generated from treated sires, compared with those from controls. There were also no significant changes in sexual behavior except for a sling decrease in mounting latency in the 5 and 15 mg/kg-day groups. At sacrifice, there were no significant differences in body weights or in non-reproductive organ weights. The weight of seminal vesicles was significantly decreased at 405 mg/kg-day, and serum testosterone levels in the same group were significantly increased by more than two times above controls. Serum testosterone was also slightly increased in the 0.045 and 0.405 mg/kg-day groups. The ventral prostate was reduced at the high dose, but the change did not reach statistical significance. Some macroscopic changes described in the text (small scrotal testes in 1 in control one at 405 mg/kg-day, undescended testes, one each, at 5, 135, and 405 mg/kg-day, and small epididymides at 405 mg/kg-day) were observed at low incidences. Cryptorchidism was unexpected and had not been observed in a total of 133 control rats used by the performing laboratory. Histopathological analysis of these macroscopically altered tissues showed (but were not limited to) reduced spermatogenesis, reduction of germ cells, desquamation of enlarged cells with multinuclei, and atrophic tubules. In macroscopically normal testes, histopathological lesions were observed in 3/9 testes examined in the 405 mg/kg-day group. Two testes showed single seminiferous tubules with reduced germ cell layers and loss of stratification, and slight focal Leydig cell hyperplasia in the third testes (this animal also had high serum testosterone). Daily sperm production was significantly decreased at $\geq$ 0.045 mg/kg-day, although when compared with the provided historical control data, the increases were significant only at 15, 135, and 405 mg/kg-day (but not at 45 mg/kg-day). The study authors did not consider the changes in the lower dose groups to be biologically relevant. Sperm morphological analysis showed an increase in abnormal sperm only at 0.045 mg/kg-day, compared to concurrent controls. The author reported NOAEL was 1.215 mg/kg-day and LOAEL was 5 mg/kg-day based on the reduction of daily sperm production, in the absence of an effect on reproductive function.

[6] 673567: Female Wistar rats (purportedly 11-16/group; there were 11-16 litters per group) were mated with males (2:1 ratio) for 3 hours, the day sperm was detected via vaginal smean and considered day 0 of gestation (GD0). Presumed pregnant dams were administered 0, 0.015, 0.045, 0.135, 0.405, 1.215, 5, 15, 45, 135 or 405 mg/kg/day of DEHP in peanut oil via gavage from GD6 to post-natal day 21 (PND21). Dams were sacrificed on PND22 and pups were weaned. Dams and pups were evaluated daily for clinical signs and maternal body weights. The maternal data and the number of live and dead pups, sex, and general signs of toxicity are all reported in a sister publication HERO ID 674171. In this reference, one or two male pups/litter were randomly selected and necropsied on PND1 and brain and liver was weighed and levels of testicular testosterone levels were measured. On PND 13, all male pups were examined for the presence of nipples. Beginning on PND 15, pups were examined daily for the age at testis descent. On PND 22, one to three male pups/litter were randomly selected for measurement of anogenital distance (AGD) and necropsied (brain, liver, testes and epididymis were weighed). The left testis of 6 pups (from different litters) were mixed. Beginning on PND33, all remaining males were evaluated daily for preputial separation. Testis histopathology was conducted in a blind manner) on 6 animals per group that were sacrificed on PND1 and PND22. On PND1, body weights were increased in a non-dose-related manner, and were significantly elevated at 0.045, 1.215, and 5.0 mg/kg-day. Liver weights were significantly increased at 135 (9%) and 405 (13%) mg/kg-day. Brain weight was increased only at 135 mg/kg-day. There were no changes in intratesticular testosterone levels on PND 1 or 13. On PND13, nipple retention was noted in the 405 mg/kg-day group and was significant both as an incidence in individual animals and as an incidence in litters. Body weights at preputial separation were significantly decreased at 0.135, 0.405, and 405 mg/kg-day, but not in other dose groups. The age at preputial separation was significantly delayed at $\geq$15 mg/kg-day. On PND 22, testis weights were significantly increased at 5, 15, 45, and 125 mg/kg-day, but not at 405 mg/mg-day. The increases were not responsive to dose. Anogenital distance was significantly decreased at the high dose on PND 22. No external malformations were observed. Histopathology revealed significantly increased incidences of bi and multi-nucleated (enlarged) gonocytes and elevated rates of gonocyte degeneration on PND1 at 405 mg/kg-day, and there as an increase in severity with dose. Incidences were also observed at 135 mg/kg-day, but the increases were not significant. Insignificant increased Incidences of loose connective tissue in the interstitium were also noted in both dose groups. The only histopathology on PND 22 was increased incidences of reduced germ cell differentiation. The author reported NOAEL was 1.215 mg/kg-day based on delays in preputial separation.

[7] 697341: Pregnant Wistar rats (16 in the controls, 8 in exposed groups) were exposed to 0, 10, 30, 100, 300, 600 or 900 mg/kg-day of di-ethylhexyl-pthalate (DEHP) via oral gavage in corn oil between GD7-21 in pregnant dams, and in PND 1-16 in male offspring. In a second experiment, animals were exposed to 0, 3, 10, 30 or 100 mg/kg-day of DEHP under identical experimental conditions. For most endpoints, the authors presented results from both experiments separately and pooled together. Pregnant dams were monitored for general signs of toxicity and both maternal weight gain from GD 7-21 and maternal weight on PDN 1 were measured. On PND 1, postimplantation-perinatal loss in the dams, live born per litter, anogenital distance (AGD) and in male offspring and body weights in both male and female offspring were evaluated. On PND 12, number of nipples (NR) in males and body weights in both male and female offspring were measured. External genital dysgenesis in male offspring was evaluated using a scoring system on PND 16. On PND 16, male offspring were sacrificed and organ weights for liver, kidney, adrenals, testes, epididymides, seminal vesicles, ventral prostate, bulbourethral glands and the levator ani/bulbocavernosus muscles (LABC) were measured. Epididymides, seminal vesicles and prostate from 1-2 animals per litter were processed for histology and immunohistochemistry of the androgen receptor (AR), vimentin and anti-mullerian hormone (AMH) and the diameter of the seminiferous tubules were measured. Gene expression for prostate binding subunit C3 (PBPC3) and ornithine decarboxylase (ODC) were measured via RT-PCR in mRNA samples of the ventral prostate.No general toxicity was observed and there were no changes in maternal body weight, maternal body weight gain, litter size, pregnancy length, sex ratio of offspring, pup weights or post-implantation/perinatal loss. Decreased AGD and increased NR were observed at doses of 10 mg/kg-day and higher in data pooled from both experiments. Increased incidence of mild external genital dysgenesis was observed at doses of 3 mg/kg-day and higher in data pooled from both experiments, however this effect was not significant at 30 mg/kg-day. Body weights of offspring were significantly reduced at PND 1 at doses of 300 mg/kg-day and higher. Decreased organ weights of LABC and prostate were observed doses of 10 mg/kg-day and higher. Right and left testis weights were reduced at doses of 600 mg/kg-day and higher. Increased liver weights were observed at 900 mg/kg-day. There were no differences in weights for epididymides, bulbourethral glands, adrenals or kidneys. Decreased diameter of the seminiferous tubules were observed at doses of 300 mg/kg-day and higher. Histopathology indicated immaturity of the seminiferous epithelium at doses of 300 mg/kg-day and higher, as well as fewer germ cells and focal Leydig cell hyperplasia. Increased staining of vimentin was observed in the testis of 6/9 males at 900 mg/kg-day. There were no differences in immunohistochemistry staining of AR or AMH in the testis. Gene expression of PBP C3 and ODC were reduced at 300 mg/kg-day and 900 mg/kg-day in the first experiment, and at 30 and 100 mg/kg-day in the second experiment. This study has a NOAEL for nutritional/metabolic endpoints at 900 mg/kg-day and a LOAEL for reproductive/developmental endpoints at 3 mg-kg/day.

[8] 674193: In a standard OECD TG 414 teratogenicity study, pregnant Wistar (Chbb/THOM outbred strain) rats (9-10/group/formulation) were administered two separate formulations of DINP (CASRN 28553-12-0) at 0, 40, 200, or 1,000 mg/kg-day, via gavage, from GD 6-15. In the first formulation (DINP – 2), at least 95% of the main alcohol components derived from n-butene, were alkyl-substituted octanol or heptanol. In the second formulation (DINP-3), codimerbutene was used to synthesize the main alcohol components, resulting in at least 60% alkyl-substituted hexanols. Dams were monitored for mortality and clinical signs of toxicity. Body weights were recorded on days GDs 0, 6, 10, 15, and 20, and body weight gain was determined. Food consumption was purportedly monitored, but no quantitative results were reported. The time of autopsy was not explicitly stated but is presumed to be GD20 based on another study cited for methods details (HERO 673425). Dam uterine, liver, and kidney weights were recorded. The numbers of corpora lutea and implantation sites were counted

along with the numbers of live fetuses, pre and post-implantation loss, and early and late resorptions. All fetuses were weighed (sex was not recorded), and external, visceral, and skeletal examinations were conducted. The percentage of fetuses (and litters) with malformations, variations, and retardations were recorded separately. No dams administered DINP-2 or DINP-3 died. One dam treated with DINP-2 showed vaginal hemorrhage during the treatment period. No other clinical signs of toxicity were reported for either formulation. No changes to dam body weights or food consumption were reported in animals dosed with DINP-2. Mean body weights on GDs 13, 15, and 17, and body weight gains from GD 6-15 were significantly reduced in animals treated with 1,000 mg/kg-day of DINP-3. High-dose animals treated with DINP-3 also showed a significant reduction (magnitude of effect not reported) in food consumption on unspecified treatment days. No organ weight changes occurred in animals dosed with DINP-2. In those administered 1,000 mg/kg-day of DINP-3, relative liver weights were significantly increased by 11% relative to controls. Absolute liver weights were not reported. For DINP-2, the only significant developmental effect that was observed was an increase in accessory 14th ribs at 1000 mg/kg/day. The only developmental effect observed fetuses of dams treated with DINP-2 was an increase in the incidences of accessory 14th ribs in high-dose animals; statistical significance was not specified. Similarly, for DINP-3, treatment-related skeletal variations (i.e., rudimentary cervical and/or accessory 14th ribs), skeletal retardations (i.e., unossified or incompletely ossified sternebrae), and soft tissue retardations (i.e., hydroureter) were observed at 1000 mg/kg/day.The maternal NOAEL was 200 mg/kg-day for DINP-2 and DINP-3 formulations and the maternal LOAEL was 1,000 mg/kg-day for DINP-2 and DINP-3 based on vaginal hemorrhage (DINP-2), decreased body weight (DINP-3), decreased food consumption (DINP-3), and increased relative liver weight (DINP-3). The developmental NOAEL was 200 mg/kg-day for both DINP-2 and DINP-3 formulations and the developmental LOAEL was 1000 mg/kg/day based on increased incidence of skeletal variations (DINP-2 and DINP-3), and skeletal and soft tissue retardations (DINP-3 only).

[9] 674193: In a standard OECD TG 414 teratogenicity study, pregnant Wistar (Chbb/THOM outbred strain) rats (9-10/group/formulation) were administered two separate formulations of DINP (CASRN 28553-12-0) at 0, 40, 200, or 1,000 mg/kg-day, via gavage, from GD 6-15. In the first formulation (DINP – 2), at least 95% of the main alcohol components derived from n-butene, were alkyl-substituted octanol or heptanol. In the second formulation (DINP-3), codimerbutene was used to synthesize the main alcohol components, resulting in at least 60% alkyl-substituted hexanols. Dams were monitored for mortality and clinical signs of toxicity. Body weights were recorded on days GDs 0, 6, 10, 15, and 20, and body weight gain was determined. Food consumption was purportedly monitored, but no quantitative results were reported. The time of autopsy was not explicitly stated but is presumed to be GD20 based on another study cited for methods details (HERO 673425). Dam uterine, liver, and kidney weights were recorded. The numbers of corpora lutea and implantation sites were counted along with the numbers of live fetuses, pre and post-implantation loss, and early and late resorptions. All fetuses were weighed (sex was not recorded), and external, visceral, and skeletal examinations were conducted. The percentage of fetuses (and litters) with malformations, variations, and retardations were recorded separately. No dams administered DINP-2 or DINP-3 died. One dam treated with DINP-2 showed vaginal hemorrhage during the treatment period. No other clinical signs of toxicity were reported for either formulation. No changes to dam body weights or food consumption were reported in animals dosed with DINP-2. Mean body weights on GDs 13, 15, and 17, and body weight gains from GD 6-15 were significantly reduced in animals treated with 1,000 mg/kg-day of DINP-3. High-dose animals treated with DINP-3 also showed a significant reduction (magnitude of effect not reported) in food consumption on unspecified treatment days. No organ weight changes occurred in animals dosed with DINP-2. In those administered 1,000 mg/kg-day of DINP-3, relative liver weights were significantly increased by 11% relative to controls. Absolute liver weights were not reported. For DINP-2, the only significant developmental effect that was observed was an increase in accessory 14th ribs at 1000 mg/kg/day. The only developmental effect observed fetuses of dams treated with DINP-2 was an increase in the incidences of accessory 14th ribs in high-dose animals; statistical significance was not specified. Similarly, for DINP-3, treatment-related skeletal variations (i.e., rudimentary cervical and/or accessory 14th ribs), skeletal retardations (i.e., unossified or incompletely ossified sternebrae), and soft tissue retardations (i.e., hydroureter) were observed at 1000 mg/kg/day.The maternal NOAEL was 200 mg/kg-day for DINP-2 and DINP-3 formulations and the maternal LOAEL was 1,000 mg/kg-day for DINP-2 and DINP-3 based on vaginal hemorrhage (DINP-2), decreased body weight (DINP-3), decreased food consumption (DINP-3), and increased relative liver weight (DINP-3). The developmental NOAEL was 200 mg/kg-day for both DINP-2 and DINP-3 formulations and the developmental LOAEL was 1000 mg/kg/day based on increased incidence of skeletal variations (DINP-2 and DINP-3), and skeletal and soft tissue retardations (DINP-3 only).

[10] 61566: In a continuous breeding study, CD-1 albino mice (40/sex in the control group and 20/sex/treatment group) were administered di(2-ethylhexyl)phthalate (DEHP; 99% purity) in the diet at concentrations of 0, 0.01, 0.1, and 0.3%. Animals were treated for a 7-day prior to mating and then continuously for 98 days during mating and cohabitation. Females were allowed to deliver each litter naturally. The number of fertile pairs (considered fertile if they produced on or more litter) and the number of litters/pair was recorded. F1 pups were assessed for body weight, sex ratio, number of live pups/litter, and proportion of pups born alive, and were sacrificed within 12 hours of birth. After 98-days of co-habitation, F0 males and females were separated and maintained on their respected diet for an additional 21 days to allow for delivery of any litters. Final litters were delivered and maintained until at least PND 21. Other endpoints evaluated in F0 animals included mortality, clinical signs, body weight (week 1 and 13) and food intake.Cross-over mating trial: At the end of the continuous breeding a crossover mating trial was performed with the control and high-dose exposed F0 males and females. Three combinations were studied: control male x control female; control male x exposed female; and exposed male x control female. The number of females with copulatory plugs and number of fertile pairs were recorded. Offspring were assessed for body weight, sex ratio, number of litters/pair and number of live litters. F0 males and females were sacrificed after the cross-over mating trail. Endpoints evaluated included body weight, organ weight (liver, right testis, right epididymis, prostate, seminal vesicles, ovaries including the oviducts, uterus, brain [females only] and pituitary gland [females only]), histopathology on reproductive organs, and sperm effects (percentage of motile sperm, concentration and percentage of abnormal sperm). One male in the 0.1% group and two females from the 0.3% group died. A cause of death was not reported. No treatment-related clinical signs were observed. Mean body weights of high-dose males at weeks 1 and 13 were comparable to the control group (data for other groups not reported; only means reported for control and high-dose group without SD). Body weight for females during continuous exposure were not reported. The study reports “mice consumed between 4.8 and 5.4 g of food per day, regardless of treatment group”. No other information is provided on food intake. During the continuous breeding phase, no litters were produced in the 0.3% group. In the 0.1% group, a significant decrease the number of litters/pair (3.07 vs 4.65 in control), live pups/litter (5.16 vs 10.62 in control), proportion of pups born above (0.80 vs 0.98 in control) and live pup weights (1.62 g vs 1.57 g in control) were observed. Fertility was reduced at 0.1%, (74% vs 100% in control), but was not statistically significant. No significant differences in fertility or reproductive parameters were seen at 0.01% compared to control. Crossover mating trials conducted with males and females from the 0.3% treated group and controls, no significant difference in libido (number of copulatory plugs) was seen between the groups. Decreased fertility (number of animals producing a litter with one or more live pups/number cohabitated) was observed in both the treated male x control group (4/20) and treated female x control group (0/16) compared to mated controls (18/20). Also, in treated males crossed with control females the proportion of pups born alive (0.71) and pup body weight (1.73 g) were significantly decreased compared to control (0.91 and 1.64 g, respectively). At necropsy, F0 males and female body weights were comparable to controls. Absolute liver weights were significantly increased in males (27%) and females (36%) compared with control. Significant decreases in the right testis (60%) and right epididymis (19%), and prostate (11%) weights were observed compared with control. No significant change in seminal vesicle weight was observed. Ovary with oviducts and uterus weights were significantly decreased (16%) compared with control. No significant differences were observed in female brain or pituitary weights were seen compared with control. In males, the study reports bilateral atrophy of the seminiferous tubules was observed in all but one male mice in the high-dose group (data not quantified or shown). The study reports no remarkable histopathology findings in females reproductive organs (no data shown). Sperm parameters effected included a significant decrease in the percentage of motile sperm (52%) and sperm concentration (4.6-fold) and a significant increase in the percentage of abnormal sperm (from 2.01% in control to 15.37% in treated) compared with control. Histopathology revealed some degree of bilateral atrophy of the seminiferous tubules in all males with the exception of one male. No author-reported NOAEL/LOAEL values were reported. Based on the data provided, a NOAEL of 0.01% and a LOAEL of 0.1% were determined based on the significant decreases in the number of litters/pair, the number of live pups/litter, the proportion of pups born alive, and live pup weights in the continuous breeding experiment.

[11] 61566: In a continuous breeding study, CD-1 albino mice (40/sex in the control group and 20/sex/treatment group) were administered di(2-ethylhexyl)phthalate (DEHP; 99% purity) in the diet at concentrations of 0, 0.01, 0.1, and 0.3%. Animals were treated for a 7-day prior to mating and then continuously for 98 days during mating and cohabitation. Females were allowed to deliver each litter naturally. The number of fertile pairs (considered

fertile if they produced on or more litter) and the number of litters/pair was recorded. F1 pups were assessed for body weight, sex ratio, number of live pups/litter, and proportion of pups born alive, and were sacrificed within 12 hours of birth. After 98-days of co-habitation, F0 males and females were separated and maintained on their respected diet for an additional 21 days to allow for delivery of any litters. Final litters were delivered and maintained until at least PND 21. Other endpoints evaluated in F0 animals included mortality, clinical signs, body weight (week 1 and 13) and food intake.Cross-over mating trial: At the end of the continuous breeding a crossover mating trial was performed with the control and high-dose exposed F0 males and females. Three combinations were studied: control male x control female; control male x exposed female; and exposed male x control female. The number of females with copulatory plugs and number of fertile pairs were recorded. Offspring were assessed for body weight, sex ratio, number of litters/pair and number of live litters. F0 males and females were sacrificed after the cross-over mating trail. Endpoints evaluated included body weight, organ weight (liver, right testis, right epididymis, prostate, seminal vesicles, ovaries including the oviducts, uterus, brain [females only] and pituitary gland [females only]), histopathology on reproductive organs, and sperm effects (percentage of motile sperm, concentration and percentage of abnormal sperm). One male in the 0.1% group and two females from the 0.3% group died. A cause of death was not reported. No treatment-related clinical signs were observed. Mean body weights of high-dose males at weeks 1 and 13 were comparable to the control group (data for other groups not reported; only means reported for control and high-dose group without SD). Body weight for females during continuous exposure were not reported. The study reports “mice consumed between 4.8 and 5.4 g of food per day, regardless of treatment group”. No other information is provided on food intake. During the continuous breeding phase, no litters were produced in the 0.3% group. In the 0.1% group, a significant decrease the number of litters/pair (3.07 vs 4.65 in control), live pups/litter (5.16 vs 10.62 in control), proportion of pups born above (0.80 vs 0.98 in control) and live pup weights (1.62 g vs 1.57 g in control) were observed. Fertility was reduced at 0.1%, (74% vs 100% in control), but was not statistically significant. No significant differences in fertility or reproductive parameters were seen at 0.01% compared to control. Crossover mating trials conducted with males and females from the 0.3% treated group and controls, no significant difference in libido (number of copulatory plugs) was seen between the groups. Decreased fertility (number of animals producing a litter with one or more live pups/number cohabitated) was observed in both the treated male x control group (4/20) and treated female x control group (0/16) compared to mated controls (18/20). Also, in treated males crossed with control females the proportion of pups born alive (0.71) and pup body weight (1.73 g) were significantly decreased compared to control (0.91 and 1.64 g, respectively). At necropsy, F0 males and female body weights were comparable to controls. Absolute liver weights were significantly increased in males (27%) and females (36%) compared with control. Significant decreases in the right testis (60%) and right epididymis (19%), and prostate (11%) weights were observed compared with control. No significant change in seminal vesicle weight was observed. Ovary with oviducts and uterus weights were significantly decreased (16%) compared with control. No significant differences were observed in female brain or pituitary weights were seen compared with control. In males, the study reports bilateral atrophy of the seminiferous tubules was observed in all but one male mice in the high-dose group (data not quantified or shown). The study reports no remarkable histopathology findings in females reproductive organs (no data shown). Sperm parameters effected included a significant decrease in the percentage of motile sperm (52%) and sperm concentration (4.6-fold) and a significant increase in the percentage of abnormal sperm (from 2.01% in control to 15.37% in treated) compared with control. Histopathology revealed some degree of bilateral atrophy of the seminiferous tubules in all males with the exception of one male. No author-reported NOAEL/LOAEL values were reported. Based on the data provided, a NOAEL of 0.01% and a LOAEL of 0.1% were determined based on the significant decreases in the number of litters/pair, the number of live pups/litter, the proportion of pups born alive, and live pup weights in the continuous breeding experiment.

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[14] 698185: In a non-guideline gestational exposure study, pregnant Long Evans rats (6-9/group) were treated with DEHP (purity not reported) at 0 (vehicle), 10, 100, or 750 mg/kg-day from gestation day (GD) 2 to GD20, via gavage in corn oil. Dam body weights were recorded prior to and after exposure. At parturition (GD21), the number of pups per dam, birth rate, percentage and number of male pups, male pup body weights and anogenital distance (AGD) were measured. Pups were sacrificed; testicular testosterone levels were assessed. Testes were processed for immunohistochemical and histochemical staining to enumerate fetal Leydig cells (FLCs) and to identify clusters and frequency distributions, and to quantify intensities of Leydig cell steroidogenic enzymes (P450scc and 3βHSD). Testicular total RNA was extracted for expression analysis of 37 pre-selected genes. Additional in vitro experiments were performed on purified and cultured FLCs which are not described here. Based on the reported number of dams per group and the study results, no dams died. No changes in dam body weights were observed. There were no differences in the number of pups per dam. Birth rates were 6/6 in the control, 10, and 100 mg/kg-day group, and 7/9 in the 750 mg/kg-day group. The percentage of male pups, number of male pups, and male pup body weights were not affected by treatment. A significant reduction in AGD was observed in the 750 mg/kg-day group, along with significant reductions (66% decrease) in the levels of testicular testosterone, compared with controls. At the low dose, testicular testosterone levels were significantly higher (50%) and at 100 mg/kg-day, testosterone levels were comparable to controls. Testis weight, and the number and size (reduced volume) of Leydig cells per testis were all significantly decreased at $\geq$100 mg/kg-day. These changes occurred in conjunction with an increase in FLC cluster sizes and an overall shift in the frequency distribution of various cluster sizes. There was a significant reduction in the frequency of single-cell clusters and an increase in the frequency of clusters containing 6-30 cells at $\geq$10 mg/kg-day. More clusters with $>$30 cells and an increase in the average number of cells per cluster were observed at 750 mg/kg-day. The expression of leukemia inhibitory factor (Lif) increased at 750 mg/kg-day and was associated with the large clusters. Numerous other gene expression changes were observed, particularly in the expression of growth factors, growth factor receptors, cholesterol transporters, and genes encoding steroidogenic enzymes and the responses were consistent with the reduced circulating testosterone levels. Both the expression and protein levels of the testicular testosterone biosynthetic enzyme P450scc were significantly decreased at 750 mg/kg-day. No author-reported toxicity values were provided; however, the fact that significant changes occurred at the lowest dose level were highlighted, and opposing directional changes in testosterone production at low and high doses were expected and consistent with other studies on DEHP. A LOAEL of 10 mg/kg-day was determined for this review based on significant increases in testicular testosterone production and alterations in the frequency distribution of FLC cluster sizes in male pups. A NOAEL could not be determined.

[15] 698185: In a non-guideline gestational exposure study, pregnant Long Evans rats (6-9/group) were treated with DEHP (purity not reported) at 0 (vehicle), 10, 100, or 750 mg/kg-day from gestation day (GD) 2 to GD20, via gavage in corn oil. Dam body weights were recorded prior to and after exposure. At parturition (GD21), the number of pups per dam, birth rate, percentage and number of male pups, male pup body weights and anogenital distance (AGD) were measured. Pups were sacrificed; testicular testosterone levels were assessed. Testes were processed for immunohistochemical and histochemical staining to enumerate fetal Leydig cells (FLCs) and to identify clusters and frequency distributions, and to quantify intensities of Leydig cell steroidogenic enzymes (P450scc and 3βHSD). Testicular total RNA was extracted for expression analysis of 37 pre-selected genes. Additional in vitro experiments were performed on purified and cultured FLCs which are not described here. Based on the reported number of dams per group and the study results, no dams died. No changes in dam body weights were observed. There were no differences in the number of pups per dam. Birth rates were 6/6 in the control, 10, and 100 mg/kg-day group, and 7/9 in the 750 mg/kg-day group. The percentage of male pups, number of male pups, and male pup body weights were not affected by treatment. A significant reduction in AGD was observed in the 750 mg/kg-day group, along with significant reductions (66% decrease) in the levels of testicular testosterone, compared with controls. At the low dose, testicular testosterone levels were significantly higher (50%) and at 100 mg/kg-day, testosterone levels were comparable to controls. Testis weight, and the number and size (reduced volume) of Leydig cells per testis were all significantly decreased at $\geq$100 mg/kg-day. These changes occurred in conjunction with an increase in FLC cluster sizes and an overall shift in the frequency distribution of various cluster sizes. There was a significant reduction in the frequency of single-cell clusters and an increase in the frequency of clusters containing 6-30 cells at $\geq$10 mg/kg-day. More clusters with $>$30 cells and an increase in the average number of cells per cluster were observed at 750 mg/kg-day. The expression of leukemia inhibitory factor (Lif) increased at 750 mg/kg-day and was associated with the large clusters. Numerous other gene expression changes were observed, particularly in the expression of growth factors, growth factor receptors, cholesterol transporters, and genes encoding steroidogenic enzymes and the responses were consistent with the reduced circulating testosterone levels. Both the expression and protein levels of the testicular testosterone biosynthetic enzyme P450scc were significantly decreased at 750 mg/kg-day. No author-reported toxicity values were provided; however, the fact that significant changes occurred at the lowest dose level were highlighted, and opposing directional changes in testosterone production at low and high doses were expected and consistent with other studies on DEHP. A LOAEL of 10 mg/kg-day was determined for this review based on significant increases in testicular testosterone production and alterations in the frequency distribution of FLC cluster sizes in male pups. A NOAEL could not be determined.

[16] 697737: In a one generation reproductive/developmental study, pregnant Long-Evans rats (11-13/group) were exposed to 0, 10 or 750 mg/kg/day of diethylhexylpthalate (DEHP) via gavage in corn oil for ~28.5 days from gestational day (GD) 12.5- postnatal day (PND) 21. Male pups were measured for anogenital distance (AGD) on PND 2 and body weights on PND 2, 35 or 49. Male pups were sacrificed on PND 21 or 49 and the following endpoints were measured: testes and prostate weights, Leydig cell histopathology (average, median and maximum number of cells per cluster were quantified), and serum testosterone levels. Additionally, testes were prepared

for mRNA and protein expression analysis.In dams, no differences in maternal body weights, birth rates, numbers of pups per dam or male:female ratio for pups were observed. All other endpoints were measured in male offspring. In male pups at 750 mg/kg/day AGD was significantly decreased by 18% on PND2, pup body weights were significantly decreased by 19% on PND 2 and by 13% on PND 35. No differences in male pup body weights, testes, or prostate weights were observed on PND49 in any group. During histopathological assessment, significantly increased mean, median, and maximum numbers of Leydig cells were observed in the testes at ≥10 mg/kg/day. Serum testosterone levels were significantly decreased at ≥10 mg/kg/day on PND 21, and at 750 mg/kg/day on PND 49. Several significant differences for mechanistic endpoints, including mRNA levels, protein expression and enzyme activity were also noted at both dose levels. No author reported POD was reported. A LOAEL of 10 mg/kg/day for reproductive/developmental effects was determined based on decreased serum testosterone levels and increased Leydig cell distribution in male offspring. No NOAEL could be determined.

[17] 5507636: In a non-guideline reproductive/developmental study, pregnant female Wistar rats (6/group) were administered di-(2-ethylhexyl) phthalate (DEHP) (analytical grade; purity ≥99.50 obtained from the product specifications reported by the vendor) daily via gavage at 0, 10, and 100 mg/kg-day from gestational day 9 to postnatal day 21 (lactation period). Litters were culled to include six F1 male offspring (36 total for further analyses. No maternal endpoints were assessed. F1 male body weights were measured weekly from postnatal days 1 through 80. On postnatal day 78, fasted F1 generation males underwent oral glucose tolerance and insulin tolerance testing (6/group). At PND 80 fasting blood glucose levels were measured in F1 males (6/group). Fed males were euthanized, and the livers were removed to evaluate glycogen concentration, enzymatic activity, protein expression, mRNA levels, and protein-DNA interactions. Blood was also collected and used for clinical chemistry assessments (6/group), measuring serum AST, ALT, ALP, urea, and creatinine. Serum hormone levels (insulin, testosterone, and estradiol) were also recorded. Body weights of F1 males showed lower birth weights and an overall decreasing trend compared with controls throughout postnatal days 1 through 80, with significant decreases at ≥10 mg/kg-day on postnatal days 1, 8, 32-80, and at 100 mg/kg-day only on postnatal days 16, 24, and 40. Dose-dependent increases in fasting blood glucose levels were also observed and were significant at ≥10 mg/kg-day. Blood glucose levels were significantly elevated in both treatment groups following the oral glucose tolerance test and after insulin injection, demonstrating glucose intolerance, and reduced insulin sensitivity. The insulin resistance index as measured by the homeostasis model assessment for insulin resistance was also increased >2-fold from controls at ≥10 mg/kg-day. Serum levels of AST, ALT, ALP, urea, creatinine, and insulin were significantly increased, while testosterone and estradiol were significantly reduced at ≥10 mg/kg-day. Hepatic glycogen concentration and glycogen synthase activity were both significantly decreased at ≥10 mg/kg-day in a dose-dependent manner. Protein expression analyses of liver tissue showed significant decreases in the levels of multiple phosphorylated proteins at ≥10 mg/kg-day, which included pIR-βTyr1162, pIRS-1Tyr632, p-AktSer473, p-GSK3βSer9, and p-FoxO1Ser256. Significant decreases in the expression of non-phosphorylated proteins were observed for IR-β, IRS-1, β-arrestin, and AKT at ≥10 mg/kg-day. Protein levels of c-Src and p-AktThr308 were significantly reduced at 100 mg/kg-day. Protein levels of GSK3β and FoxO1 were significantly increased at ≥10 mg/kg-day. No changes in protein expression were observed for p-AktTyr315 at any of the tested doses. Dose-related and significant increases in the mRNA levels and enzymatic activity of glucose-6-phosphatase and phosphoenolpyruvate carboxykinase were reported at ≥10 mg/kg-day. Significantly increased protein-DNA interactions at ≥10 mg/kg-day were observed between FoxO1 and the gene promoters, glucose-6-phosphatase and phosphoenolpyruvate carboxykinase. No author-reported toxicity values were provided. Based on the available data, following gestational and lactational exposure to DEHP, a LOAEL of 10 mg/kg-day, the lowest dose, was identified for F1 generation males based on effects in both apical and mechanistic hepatic endpoints, clinical chemistry changes (i.e., renal, reproductive/developmental) and alterations in nutritional/metabolic endpoints.

[18] 2519077: In a primarily mechanistic study focused on assessing the effects of gestational DEHP exposure on insulin signaling molecules, the glucose transporter 4 and its epigenome in gastr4ocnemius muscle of F1 offspring, pregnant Wistar rats (6/group) were administered DEHP at 0, 1, 10, and 100 mg/kg-day, via gavage in olive oil, from GD9 to GD21 or until parturition. On PND1, the litters were culled to 4/sex/litter. On PND60 offspring (6/sex; 1/sex/litter) were administered an oral glucose tolerance and insulin tolerance test. Other offspring were sacrificed on PND60. Blood was collected for serum fasting insulin measurements. mRNA was extracted from skeletal muscle for RT-PCR, Western blots were conducted on plasma membrane and cytosolic fractions to estimate GLUT4 and GLUT2 levels, and histone deacetylase 2 levels were estimated in nuclear lysate fractions, and global DNA methylation levels were determined as well as methylation of CpG islands near the GLUT4 promoter. Chromatin immunoprecipitation (ChIP) was conducted to assess the binding of MYOD and HDAC2 to the GLUT4 promotor region. Immunohistochemistry was performed on skeletal muscle to detect GLUT4. Visceral adipose tissue deposits were excised and weighed. Western blots were also conducted on islet tissue lysates. Other endpoints included quantification of insulin receptors, glucose uptake and oxidation assessments, and determination of glycogen expression. Lean body weights of male and female offspring were significantly decreased in all treatment groups, compared with controls. Fat weight was increased at 10 and 100 mg/kg-day in both males and females. Significant, dose-related increases in fasting blood glucose levels and decreases in fasting insulin levels and muscle glycogen levels were observed in animals from all treatment groups. Tolerance tests showed persistently high glucose levels in treated animals, whereas levels decreased slowly in controls, indicating reduced insulin sensitivity. In skeletal muscle, there was a dose-dependent reduction in insulin binding and the expression and protein levels of molecules involved in insulin signaling were significantly altered, compared with controls, in both sexes. Immunohistochemistry showed a dose-dependent decrease in GLUT4 staining in skeletal muscle, consistent with reductions in plasma membrane and cytosol fractions. An increase in HDAC2 (repressor) and a decrease in the MYOD (enhancer) bound to the GLUT4 promoter region was observed and nuclear concentrations of MYOD and SREBP1c proteins were significantly decreased in both sexes. Treated animals showed alterations in global DNA methylation, with a specific increase in methylation at the GLUT4 MYOD-binding site; additionally, there were dose-dependent increases in the expression of DNA methyltransferases. Finally, there was a dose-dependent decline in glucose uptake and oxidation, that was significant in males and females from all dose groups. Overall, the data indicate that gestational exposure to DEHP leads to glucose metabolic dysfunction in adulthood (PND60). NOAEL and LOAEL values were not provided by the study author. A LOAEL based on apical endpoints of 1 mg/kg-day was determined for this review based on reductions in lean body weight, increased fat weight, and increases in fasting blood glucose and decreases in fasting insulin levels in adult rats exposed in utero. A mechanistic LOAEL of 1 mg/kg-day was determined based on gene expression, epigenetic, and protein level changes indicating glucose metabolic dysfunction.

[19] 732820: In a reproduction/developmental toxicity study, CD-1 mice (10/sex/group) were administered bis(2-ethylhexyl) phthalate (DEHP, >97% purity) in the diet at concentrations of 0, 0.01, 0.03, and 0.09% for 4 weeks (from 5-9 weeks of age) and then mated (1:1 ratio within same treatment group) for 5 days. Males were then removed, and females were allowed to deliver naturally. The average daily intake was estimated by study authors as the following: preconception males: 0, 15.59, 46.53, and 142.08 mg/kg/day; preconception females: 0, 19.86, 56.23, and 168.17 mg/kg/day; mating: 0, 14.67, 40.02, and 125.77 mg/kg/day at 0, 0.01, 0.03, and 0.09%, respectively. During gestation intake was reported as: 0, 16.84, 46.58, 140.15 and lactation: 0, 59.89, 172.28, and 493.00 mg/kg/day at 0, 0.01, 0.03, and 0.09%, respectively. Endpoints in the F0 animals included body weight (days 0, 2, 4, 7, 14, 21, 28 and 30 of the pre-mating period), food intake and exploratory behavior (after 3 weeks of dosing, prior to mating). Litter size, litter weight, and sex ratio were assessed at PND 0; individual weights of offspring were measured at PNDs 0, 4, 7, 14, and 21 and survival indices were calculated. Offspring were weaned at 4 weeks and one male and female per litter were randomly selected to continue treatment. Body weights of these animals were recorded on weeks 4, 5, 6, 7, 8, and 9. F1 animals were assessed in a variety of neurobehavioral test: surface righting and negative geotaxis tests (PNDs 4 and 7); cliff avoidance was tested (PND 7); swimming behavior (PNDs 4 and 14); olfactory orientation (PND 14); exploratory behavior (week 3 and 8 weeks); and water T-maze test (week 7). Food intake for weaned F1 generation offspring was recoded. Estimated daily intake for F1 males was 0, 15.85, 47.82, and 144.59; and F1 females: 0, 19.00, 56.19, and 170.50 mg/kg/day at 0, 0.01, 0.03, and 0.09%, respectively.In the F0-generation no significant differences in mean body weights of males and females were seen compared to controls during any time point (data not shown). Food intake was not significantly different between the dose groups; suggesting no palatability issues. No significant, adverse effects on exploratory behavior were observed in either F0 sex after 3 weeks of exposure compared to control (data not shown). All females were pregnant except for one female in the 0.01% and 0.03% groups each. The female in the 0.03% group had an aborted pregnancy. There were no significant differences in number of litters, number of offspring, average litter size, average litter weight, or sex ratio compared with control.Body weights of male pups were significantly decreased at birth (7%) in the 0.01% group; however, no significant differences were observed thereafter, and this was determined to be related to litter weight by study authors. After weaning, no significant difference in body weight (data not shown) or food intake were seen compared to control. Survival indices were significantly decreased in females at 0.09% on PND 4, 7, and 14 by

up to 10%; however, average litter size was not affected. Surface righting was significantly delayed in males on PND 7 (0.09% group) in a dose-related manner (PND 4 not reported); and in females on PND 4 (0.01% and 0.03% group) and PND 7 (0.01% group) compared with control. In the water T-maze test, time taken was significantly reduced on the second and third trials as compared to the first trial in the control and 0.01% groups males. The 0.01% males also showed significantly decreased number of errors on the third trial compared to the first trial. In females, time taken was significantly reduced in the second trial for the 0.03% group and in the third trial in control and 0.09% groups compared to the first trial. The number of errors was significantly increased in the 0.01% group compared to controls in the third trial. Overall, though no significant adverse effect on maze learning was seen compared to control. In all other neurobehavioral tests, no adverse effects were seen compared with control (data not shown). No changes in exploratory behavior were seen in F1 offspring (3 and 8 weeks) compared to control (data not shown). Study authors concluded that DEHP showed few significant, adverse effects on reproduction and neurobehavioral parameters. Adverse effects on surface righting, indicative of development of coordinated movement, were observed in male offspring. It was likely that DEHP did not produce effects on the central nervous system. No author-reported NOAEL/LOAEL values were reported. Based on the data provided, a NOAEL of 0.03% and a LOAEL of 0.09% were determined based on significant delay in surface righting.

[20] 732820: In a reproduction/developmental toxicity study, CD-1 mice (10/sex/group) were administered bis(2-ethylhexyl) phthalate (DEHP, >97% purity) in the diet at concentrations of 0, 0.01, 0.03, and 0.09% for 4 weeks (from 5-9 weeks of age) and then mated (1:1 ratio within same treatment group) for 5 days. Males were then removed, and females were allowed to deliver naturally. The average daily intake was estimated by study authors as the following: preconception males: 0, 15.59, 46.53, and 142.08 mg/kg/day; preconception females: 0, 19.86, 56.23, and 168.17 mg/kg/day; mating: 0, 14.67, 40.02, and 125.77 mg/kg/day at 0, 0.01, 0.03, and 0.09%, respectively. During gestation intake was reported as: 0, 16.84, 46.58, 140.15 and lactation: 0, 59.89, 172.28, and 493.00 mg/kg/day at 0, 0.01, 0.03, and 0.09%, respectively. Endpoints in the F0 animals included body weight (days 0, 2, 4, 7, 14, 21, 28 and 30 of the pre-mating period), food intake and exploratory behavior (after 3 weeks of dosing, prior to mating). Litter size, litter weight, and sex ratio were assessed at PND 0; individual weights of offspring were measured at PNDs 0, 4, 7, 14, and 21 and survival indices were calculated. Offspring were weaned at 4 weeks and one male and female per litter were randomly selected to continue treatment. Body weights of these animals were recorded on weeks 4, 5, 6, 7, 8, and 9. F1 animals were assessed in a variety of neurobehavioral test: surface righting and negative geotaxis tests (PNDs 4 and 7); cliff avoidance was tested (PND 7); swimming behavior (PNDs 4 and 14); olfactory orientation (PND 14); exploratory behavior (week 3 and 8 weeks); and water T-maze test (week 7). Food intake for weaned F1 generation offspring was recoded. Estimated daily intake for F1 males was 0, 15.85, 47.82, and 144.59; and F1 females: 0, 19.00, 56.19, and 170.50 mg/kg/day at 0, 0.01, 0.03, and 0.09%, respectively.In the F0-generation no significant differences in mean body weights of males and females were seen compared to controls during any time point (data not shown). Food intake was not significantly different between the dose groups; suggesting no palatability issues. No significant, adverse effects on exploratory behavior were observed in either F0 sex after 3 weeks of exposure compared to control (data not shown). All females were pregnant except for one female in the 0.01% and 0.03% groups each. The female in the 0.03% group had an aborted pregnancy. There were no significant differences in number of litters, number of offspring, average litter size, average litter weight, or sex ratio compared with control.Body weights of male pups were significantly decreased at birth (7%) in the 0.01% group; however, no significant differences were observed thereafter, and this was determined to be related to litter weight by study authors. After weaning, no significant difference in body weight (data not shown) or food intake were seen compared to control. Survival indices were significantly decreased in females at 0.09% on PND 4, 7, and 14 by up to 10%; however, average litter size was not affected. Surface righting was significantly delayed in males on PND 7 (0.09% group) in a dose-related manner (PND 4 not reported); and in females on PND 4 (0.01% and 0.03% group) and PND 7 (0.01% group) compared with control. In the water T-maze test, time taken was significantly reduced on the second and third trials as compared to the first trial in the control and 0.01% groups males. The 0.01% males also showed significantly decreased number of errors on the third trial compared to the first trial. In females, time taken was significantly reduced in the second trial for the 0.03% group and in the third trial in control and 0.09% groups compared to the first trial. The number of errors was significantly increased in the 0.01% group compared to controls in the third trial. Overall, though no significant adverse effect on maze learning was seen compared to control. In all other neurobehavioral tests, no adverse effects were seen compared with control (data not shown). No changes in exploratory behavior were seen in F1 offspring (3 and 8 weeks) compared to control (data not shown). Study authors concluded that DEHP showed few significant, adverse effects on reproduction and neurobehavioral parameters. Adverse effects on surface righting, indicative of development of coordinated movement, were observed in male offspring. It was likely that DEHP did not produce effects on the central nervous system. No author-reported NOAEL/LOAEL values were reported. Based on the data provided, a NOAEL of 0.03% and a LOAEL of 0.09% were determined based on significant delay in surface righting.

[21] 3108900: In a dose range-finding study, Sprague-Dawley Crl:CD BR rats (8 breeding pairs/group) were administered DEHP via the diet at doses of 0, 5,000, and 10,000 ppm from one week prior to mating, through mating (co-housed for 28-day) until necropsy (after PND21). Mean intake was 321.42 and 643.95 mg/kg-day. Parental animals were observed for mortality and clinical signs of toxicity. Body weights and food and water consumption were recorded. Litter endpoints included the total number of pups, live and dead pups, number per sex, and total male and female body weights on PNDs 1, 4, and 21, and anogenital distance and individual pup weights on PND1 only. Offspring were sacrificed on PND21 and subjected to gross necropsy; the uterus, cervix, and vagina from four female offspring per litter were weighed. Dams and sires were weighed at sacrifice. No animals died and there were no clinical signs of toxicity that were considered to be treatment-related. Female body weights were significantly reduced (13-25%) during weeks 6-8 at 10,000 ppm. Male body weights were comparable to controls. Food consumption in males was decreased during week 1 of the study without corresponding changes in body weights. Dam food consumption decreased up to 45.3% at 10,000 ppm throughout most of the lactation period and was decreased by 21% at 5,000 ppm during PND 8-14. Water consumption was also significantly decreased in females during the same periods. There were corresponding decreases in male and female pup weights in the 10,000 ppm group on PND 4 (9%-12%) and PND 21 (28%-30%), and the ratio of anogenital distance to pup weight was significantly increased. Uterus/cervix/and vagina weights of F1 female offspring were significantly decreased at ≥5,000 ppm. Toxicity values were not derived by the study authors, but it was reported that there were treatment-related effects in both dose groups. Based on the information provided, a LOAEL of 5,000 ppm (321.42 mg/kg-day) was identified based on decreased uterus/cervix/and vagina weights in female offspring and decreased dam and male and female pup body weights at a higher dose. Developmental effects occurred at doses causing reductions in maternal food and water intake.

[22] 3108900: In a dose range-finding study, Sprague-Dawley Crl:CD BR rats (8 breeding pairs/group) were administered DEHP via the diet at doses of 0, 5,000, and 10,000 ppm from one week prior to mating, through mating (co-housed for 28-day) until necropsy (after PND21). Mean intake was 321.42 and 643.95 mg/kg-day. Parental animals were observed for mortality and clinical signs of toxicity. Body weights and food and water consumption were recorded. Litter endpoints included the total number of pups, live and dead pups, number per sex, and total male and female body weights on PNDs 1, 4, and 21, and anogenital distance and individual pup weights on PND1 only. Offspring were sacrificed on PND21 and subjected to gross necropsy; the uterus, cervix, and vagina from four female offspring per litter were weighed. Dams and sires were weighed at sacrifice. No animals died and there were no clinical signs of toxicity that were considered to be treatment-related. Female body weights were significantly reduced (13-25%) during weeks 6-8 at 10,000 ppm. Male body weights were comparable to controls. Food consumption in males was decreased during week 1 of the study without corresponding changes in body weights. Dam food consumption decreased up to 45.3% at 10,000 ppm throughout most of the lactation period and was decreased by 21% at 5,000 ppm during PND 8-14. Water consumption was also significantly decreased in females during the same periods. There were corresponding decreases in male and female pup weights in the 10,000 ppm group on PND 4 (9%-12%) and PND 21 (28%-30%), and the ratio of anogenital distance to pup weight was significantly increased. Uterus/cervix/and vagina weights of F1 female offspring were significantly decreased at ≥5,000 ppm. Toxicity values were not derived by the study authors, but it was reported that there were treatment-related effects in both dose groups. Based on the information provided, a LOAEL of 5,000 ppm (321.42 mg/kg-day) was identified based on decreased uterus/cervix/and vagina weights in female offspring and decreased dam and male and female pup body weights at a higher dose. Developmental effects occurred at doses causing reductions in maternal food and water intake.

[23] 3108900: In a multigenerational study, groups of Sprague Dawley Crl:CD BR rats (17 mating pairs per generation) were administered DEHP (purity 99.8%) in the diet at doses of 1.5 (control), 10, 30, 100, 300, 1,000, and

7500 ppm across three generations. After the first generation (F1a) two additional groups, a second control and a 10,000 ppm group were added and were exposed under the same conditions as the main group animals. F0 animals were exposed for 6 weeks pre-mating, then through 9 weeks of cohabitation to yield the F1a, F1b, and F1c litters. F1a and F1b litters were sacrificed on PND1. F1c animals were maintained through weaning and were placed on similar diets. On PND16 3 males and 2 females per litter were randomly selected for mating. On ~PND 81 1/sex of the selected animals (avoiding sibling matings) were bred to generate F2a, F2b, and F2c litters, and similarly, a subset of F2c adults were dosed as their parents after weaning and bred to produce F3a, F3b, and F3c litters. Only F0 and F1 adults were exposed to 10,000 ppm due to the inability of the exposed F1c animals to produce F2 litters. To further test the lack of reproduction observed in the 10,000 ppm group, treated F1 males and females in the 10,000-ppm group and their respective controls were cohabited with untreated animals of the opposite sex in a one-week crossover mating experiment. A similar cross-over cohabitation experiment was done with F2 control and 7,500 ppm group animals at the end of their standard mating periods. F3c pups selected for measurements of reproductive endpoints were maintained, after weaning, presumably on similar diets until necropsy. Based on measured feed consumption, doses were calculated to be 0.12, 0.78, 2.4, 7.9, 23, 77, 592, and 775 mg/kg/day in the F0 animals; 0.09, 0.48, 1.4, 4.9, 14, 48, 391, and 543 mg/kg/day in the F1 animals; and 0.1, 0.47, 1.4, 4.8, 14, 46, 359 mg/kg/day in the F2 animals. A schematic of the study design indicated F3c animals were fed the exposure diets after weaning, but no dosing for F3c animals was provided. It is unclear whether these animals were actually exposed beyond weaning to the test substance. All mated and unmated adults in the F0, F1, and F2 generations were monitored for mortality, clinical signs, food and water consumption, and body weights. Vaginal cytology data were collected from all F0 and parental F1c females after weaning. All controls, F0, and parental F1 and F2 animals (10/sex) were necropsied on study days 175-177 (F0 males), 171 (F0 females), or on postnatal days (PNDs) 215-217 $\pm$ 12 (mated F1 males and females), 249 (unmated F1 males), 248-250 $\pm$ 10 (F2 mated males and females), and 241-243 $\pm$ 10 (F2 unmated males). Organ weights (liver, adrenals, kidneys, testis, epididymis, cauda epididymis, prostate, ovaries, seminal vesicles with coagulating glands, uterus/vagina/cervix, and pituitary) sperm analysis, and gross examinations and limited/select histopathology was conducted. The first two litters of all generations (F1a and F1b, F2a and F2b, and F3a and F3b), were counted (total number of pups and number of live and dead pups), weighed (litter weights and individual pup weights, sexed, and AGD was measured. These pups were all sacrificed on PND1 without necropsy. The third litter of each generation (F1c, F2c, and F3c) were reared at least until weaning. Endpoints included those noted above, with additional recordings on PND 1, 4, 7, 14, and 21; nipple retention in males was observed on PNDs 12 and 13. Estradiol and female stimulating hormone (FSH) were measured in F3c pups at necropsy. One male and one female per litter were selected for cohabitation. Three additional "non-mating" males per litter were held and evaluated for testicular descent and preputial separation. One non-mated female per litter and one additional male were kept until PND 60-74 (female) or PND 63-64 (male) to evaluate sexual development parameters prior to necropsy. Reproductive performance from the crossover matings were assessed. The cross-over F2 and F3 litters were examined as per the F1a/F2a and F1b/F2b litters and were euthanized on PND1. The uterine contents of the naïve females were examined for the number of implantation sites. No treatment-related deaths were observed. Deaths in F0 animals included 1 control male, 1 male each at 30 ppm and 7,500 ppm, one female at 10 ppm and one female from the 1,000 ppm group. F1 adult deaths included 2 mating males (300 and 10,000 ppm), 4 non-mating males (one at 30 and 100 ppm and two at 7,500 ppm), and 2 control females. Deaths in F2 adults included 2 control males, and one male each at 30 and 7,000 ppm. In general, incidences of clinical signs were low, except for some evidence of abrasions and alopecia and urine stains. Alopecia is commonly seen and likely caused by contact with the feeder. None of the clinical signs were considered to be treatment-related. In adults, biologically relevant ($\geq$10%) decreases in terminal body weights that were also statistically significant was observed at 10,000 ppm (F0 and F1 females, F1 non-mated and mated males), and at 7,500 ppm (non-mated F1 males, mated and non-mated F2 males). During several weeks of exposure, the body weights were decreased 12.1-15.3% and 12.0 – 15.1% in mated and unmated F2 males, respectively, compared to controls. This was observed despite a general increase in food consumption in most groups, particularly in F1 (7,500 and 10,000 ppm males) and in F2 (7,500 ppm males and females) animals. Organ weight changes, primarily to the liver, kidney, and male reproductive organs, were observed at 7,500 ppm and above. Significant organ weight changes in adult animals included: increased absolute and relative liver weights at 10,000 ppm (F0 males and females, F1 non-mated males, F1 females (relative only)), at 7,500 ppm (F0 males and females, F1 mated males and F1 females, F2 unmated males and F2 females, and F2 mated males (relative only), and at 1,000 ppm (F1 mated males (absolute only), F2 females (relative only)). Kidney weights were significantly increased at 10,000 ppm (F0 males, and F0 females F1 females (absolute only), F1 unmated males (relative only)), and at 7,500 ppm (F0 males and females (relative only), unmated F1 and F2 males (relative only), and mated F2 males (relative only), decreased absolute and relative testes weights and testis (F0 (absolute only), F1 and F2 mated and unmated males). Other significant organ weight changes that only occurred at doses of 7,500 ppm or above included decreased absolute and relative epididymis (F0 (absolute only), F1, and F2 mated and unmated males), decreased cauda epididymis, (F0 (absolute only), F1 mated and unmated males, F2 mated (absolute only) and unmated males), decreased ventral prostate (F1 mated and unmated males (absolute), and dorsolateral prostate (F1 mated males (absolute), decreased seminal vesicle (F2 mated males, absolute only),increased pituitary (F1 non-mated males), increased relative adrenal (F1 mated and unmated males), increased relative uterus (F1 females), and increased relative ovarian (F1 females) weights. Necropsy and histopathology findings in non-reproductive organs, specifically in the kidneys, adrenals, and liver, were observed $\geq$1,000 ppm. These included lesions in the adrenal cortex (vacuolation in F0 males at 10,000 ppm and in F1 males at $\geq$7,500 ppm), the liver (hepatocellular hypertrophy in F0 females at $\geq$7,500 ppm, and in F1 males at $\geq$ 1,000 ppm and in F1 females at 7,500 ppm; in F2 males at $\geq$ 1,000 ppm and in F2 females at 7,500 ppm), and the kidneys (dilation of tubules and mineralization, occasionally associated with chronic pyelonephritis in F1 and F2 males and females at $\geq$7,500 ppm). Increases in male reproductive tract malformations (RTMs) were observed at $\geq$ 300 ppm. F0 males showed minimal to marked atrophy of the seminiferous tubules, loss of germ cells, and Sertoli cell-only tubules at 10,000 ppm. Changes were associated with secondary changes to the epididymis (low incidence) and correlated with small testes that were observed grossly. In F1 males, gross observations included small testis in 100% of males at 10,000 ppm (mating and non-mating), in 70% of mating males at 7,500 ppm and in 4% of males at 300 ppm. Small epididymis in 100% at 10,000 ppm and 2% at 300 ppm (non-mating). Histopathology showed minimal to marked atrophy of seminiferous tubules with occasional failure of sperm release in all males at 7,500 and 10,000 ppm. Minimal atrophy of seminiferous tubules was also observed in 1/10 males in the 100 and 300 ppm groups, but not the 1,000 ppm group. Increased incidences of sloughed epithelial cells/residual bodies at 7,500 ppm and aspermia at 7,500 and 10,000 ppm were also observed. Sertoli cell vacuolation was noted, but this was also observed in controls and additional analysis by the pathology working group indicated that the Sertoli cell vacuolation likely resulted from the fixation process. In F2 males, there was minimal to-marked atrophy of seminiferous tubules occurred in 10/10 males, and secondary changes in the epididymis were observed at 7,500 ppm. Effects on sperm parameters were observed at $\geq$7,500 ppm. Due to technical difficulties, epididymal sperm data for F0 10,000 ppm males was not obtained, and F1 males in the 10,000 ppm group did not contain enough sperm for analysis. Changes that could be measured included significant decreases in sperm motility (F0 at 10,000 ppm, F2), epididymal sperm density (F2), total number of sperm per cauda (F2), number of sperm per mg testis (F1, F2), and total number of spermatids per testis (F1, F2). Abnormal sperm morphology was seen at $\geq$100 ppm in F2 males. No morphological changes in sperm morphology were observed in F0 or F1 males up to the highest dose examined (7,500 ppm). There were no effects on the pregnancy index of F0 animals during the production of the F1a, F1b, or F1c litters. Mated F1c animals in the 10,000 ppm group produced no litters, but there were no effects on pregnancy in the other dose groups. Mating of F2c animals resulted in significant reductions in the percentages of dams pregnant (F3a, F3b, F3c). Litter effects (e.g., litter size, live offspring, and pup body weights) were only observed at 7,500 ppm and above but were not consistent across generations or litters and were not clearly dose-dependent. Vaginal cytology showed differences in the amount of time spent in estrous in F0 dams at 10, 300, 1,000, and 7,500 ppm, compared with controls. In F1 dams, the cycle length was increased at 10,000 ppm; there were no changes in F2 dams. Delayed developmental parameters (e.g., vaginal opening, testicular descent, preputial separation) were observed in F1c offspring at $\geq$7,500 ppm. In F2c offspring, vaginal opening was delayed at 7,500 ppm, preputial separation was delayed at $\geq$ 10 ppm and testicular descent was delayed at $\geq$30 ppm. In F3c offspring, delays in these parameters were observed in the 7,500 ppm group only. Anogenital distance was significantly decreased in F1 litters at $\geq$7,500 ppm and at 7,500 ppm in F2 litters and in the F3a pups. In crossover mating experiments, where treated F1 females (10,000 ppm) were mated to naïve males there was an increase in pregnancies, but there were significant decreases in live male pup weights, in AGD in males, and an increase in the ratio of female AGD/pup weight. F1 dam body weights were decreased (23.9%) at delivery. When treated F2 females (7,500 ppm) were mated to naïve males, there were significant decreases in male and female (and combined) pup weights both with and without adjustment for litter size and decreased AGD. Average dam body weights were also reduced at delivery. F1 males treated at 10,000 ppm mated to naïve females resulted in the production of no offspring and therefore significant decreases in the mating and pregnancy indices (they were zero) and a 97.9% decrease in the number of implantations were observed. In the F2 matings of males dosed with 7,500 ppm to naïve females, there were significant decreases in the pregnancy and fertility indices, and in male pup weights and implantation sites. HERO 5556685 reported a NOAEL of 100 ppm (4.8 mg/kg-day) for the combined F1 and F2 number of litters with reproductive tract malformations (RTMs). The LOAEL was 300 ppm (14 mg/kg-day). The authors did note that

the relationship between the single RTMs in 10 and 30 ppm group F1 offspring and treatment cannot be ruled out. The BMD and BMDL values for RTM data were 257 and 169 ppm (F1 data), 233 and 77 ppm (F2 data), and 198 and 142 ppm (combined F1 and F2 data). The EC50 values for RTM were 2,771 ppm (F1), 1,480 ppm (F2), and 2,094 ppm (combined F1 and F2). The F1 1,000 ppm group may have been an outlier, and when that group is removed, the F1 EC50 is 1,406 ppm.

[24] 3108900: In a multigenerational study, groups of Sprague Dawley Crl:CD BR rats (17 mating pairs per generation) were administered DEHP (purity 99.8%) in the diet at doses of 1.5 (control), 10, 30, 100, 300, 1,000, and 7500 ppm across three generations. After the first generation (F1a) two additional groups, a second control and a 10,000 ppm group were added and were exposed under the same conditions as the main group animals. F0 animals were exposed for 6 weeks pre-mating, then through 9 weeks of cohabitation to yield the F1a, F1b, and F1c litters. F1a and F1b litters were sacrificed on PND1. F1c animals were maintained through weaning and were placed on similar diets. On PND16 3 males and 2 females per litter were randomly selected for mating. On ~PND 81 1/sex of the selected animals (avoiding sibling matings) were bred to generate F2a, F2b, and F2c litters, and similarly, a subset of F2c adults were dosed as their parents after weaning and bred to produce F3a, F3b, and F3c litters. Only F0 and F1 adults were exposed to 10,000 ppm due to the inability of the exposed F1c animals to produce F2 litters. To further test the lack of reproduction observed in the 10,000 ppm group, treated F1 males and females in the 10,000-ppm group and their respective controls were cohabited with untreated animals of the opposite sex in a one-week crossover mating experiment. A similar cross-over cohabitation experiment was done with F2 control and 7,500 ppm group animals at the end of their standard mating periods. F3c pups selected for measurements of reproductive endpoints were maintained, after weaning, presumably on similar diets until necropsy. Based on measured feed consumption, doses were calculated to be 0.12, 0.78, 2.4, 7.9, 23, 77, 592, and 775 mg/kg/day in the F0 animals; 0.09, 0.48, 1.4, 4.9, 14, 48, 391, and 543 mg/kg/day in the F1 animals; and 0.1, 0.47, 1.4, 4.8, 14, 46, 359 mg/kg/day in the F2 animals. A schematic of the study design indicated F3c animals were fed the exposure diets after weaning, but no dosing for F3c animals was provided. It is unclear whether these animals were actually exposed beyond weaning to the test substance. All mated and unmated adults in the F0, F1, and F2 generations were monitored for mortality, clinical signs, food and water consumption, and body weights. Vaginal cytology data were collected from all F0 and parental F1c females after weaning. All controls, F0, and parental F1 and F2 animals (10/sex) were necropsied on study days 175-177 (F0 males), 171 (F0 females), or on postnatal days (PNDs) 215-217 $\pm$ 12 (mated F1 males and females), 249 (unmated F1 males), 248-250 $\pm$ 10 (F2 mated males and females), and 241-243 $\pm$ 10 (F2 unmated males). Organ weights (liver, adrenals, kidneys, testis, epididymis, cauda epididymis, prostate, ovaries, seminal vesicles with coagulating glands, uterus/vagina/cervix, and pituitary) sperm analysis, and gross examinations and limited/select histopathology was conducted. The first two litters of all generations (F1a and F1b, F2a and F2b, and F3a and F3b), were counted (total number of pups and number of live and dead pups), weighed (litter weights and individual pup weights, sexed, and AGD was measured. These pups were all sacrificed on PND1 without necropsy. The third litter of each generation (F1c, F2c, and F3c) were reared at least until weaning. Endpoints included those noted above, with additional recordings on PND 1, 4, 7, 14, and 21; nipple retention in males was observed on PNDs 12 and 13. Estradiol and female stimulating hormone (FSH) were measured in F3c pups at necropsy. One male and one female per litter were selected for cohabitation. Three additional "non-mating" males per litter were held and evaluated for testicular descent and preputial separation. One non-mated female per litter and one additional male were kept until PND 60-74 (female) or PND 63-64 (male) to evaluate sexual development parameters prior to necropsy. Reproductive performance from the crossover matings were assessed. The cross-over F2 and F3 litters were examined as per the F1a/F2a and F1b/F2b litters and were euthanized on PND1. The uterine contents of the naïve females were examined for the number of implantation sites. No treatment-related deaths were observed. Deaths in F0 animals included 1 control male, 1 male each at 30 ppm and 7,500 ppm, one female at 10 ppm and one female from the 1,000 ppm group. F1 adult deaths included 2 mating males (300 and 10,000 ppm), 4 non-mating males (one at 30 and 100 ppm and two at 7,500 ppm), and 2 control females. Deaths in F2 adults included 2 control males, and one male each at 30 and 7,000 ppm. In general, incidences of clinical signs were low, except for some evidence of abrasions and alopecia and urine stains. Alopecia is commonly seen and likely caused by contact with the feeder. None of the clinical signs were considered to be treatment-related. In adults, biologically relevant ($\geq$10%) decreases in terminal body weights that were also statistically significant was observed at 10,000 ppm (F0 and F1 females, F1 non-mated and mated males), and at 7,500 ppm (non-mated F1 males, mated and non-mated F2 males). During several weeks of exposure, the body weights were decreased 12.1-15.3% and 12.0 – 15.1% in mated and unmated F2 males, respectively, compared to controls. This was observed despite a general increase in food consumption in most groups, particularly in F1 (7,500 and 10,000 ppm males) and in F2 (7,500 ppm males and females) animals. Organ weight changes, primarily to the liver, kidney, and male reproductive organs, were observed at 7,500 ppm and above. Significant organ weight changes in adult animals included: increased absolute and relative liver weights at 10,000 ppm (F0 males and females, F1 non-mated males, F1 females (relative only)), at 7,500 ppm (F0 males and females, F1 mated males and F1 females, F2 unmated males and F2 females, and F2 mated males (relative only), and at 1,000 ppm (F1 mated males (absolute only), F2 females (relative only)). Kidney weights were significantly increased at 10,000 ppm (F0 males, and F0 females F1 females (absolute only), F1 unmated males (relative only)), and at 7,500 ppm (F0 males and females (relative only), unmated F1 and F2 males (relative only), and mated F2 males (relative only), decreased absolute and relative testes weights and testis (F0 (absolute only), F1 and F2 mated and unmated males). Other significant organ weight changes that only occurred at doses of 7,500 ppm or above included decreased absolute and relative epididymis (F0 (absolute only), F1, and F2 mated and unmated males), decreased cauda epididymis, (F0 (absolute only), F1 mated and unmated males, F2 mated (absolute only) and unmated males), decreased ventral prostate (F1 mated and unmated males (absolute), and dorsolateral prostate (F1 mated males (absolute), decreased seminal vesicle (F2 mated males, absolute only),increased pituitary (F1 non-mated males), increased relative adrenal (F1 mated and unmated males), increased relative uterus (F1 females), and increased relative ovarian (F1 females) weights. Necropsy and histopathology findings in non-reproductive organs, specifically in the kidneys, adrenals, and liver, were observed $\geq$1,000 ppm. These included lesions in the adrenal cortex (vacuolation in F0 males at 10,000 ppm and in F1 males at $\geq$7,500 ppm), the liver (hepatocellular hypertrophy in F0 females at $\geq$7,500 ppm, and in F1 males at $\geq$ 1,000 ppm and in F1 females at 7,500 ppm; in F2 males at $\geq$ 1,000 ppm and in F2 females at 7,500 ppm), and the kidneys (dilation of tubules and mineralization, occasionally associated with chronic pyelonephritis in F1 and F2 males and females at $\geq$7,500 ppm). Increases in male reproductive tract malformations (RTMs) were observed at $\geq$ 300 ppm. F0 males showed minimal to marked atrophy of the seminiferous tubules, loss of germ cells, and Sertoli cell-only tubules at 10,000 ppm. Changes were associated with secondary changes to the epididymis (low incidence) and correlated with small testes that were observed grossly. In F1 males, gross observations included small testis in 100% of males at 10,000 ppm (mating and non-mating), in 70% of mating males at 7,500 ppm and in 4% of males at 300 ppm. Small epididymis in 100% at 10,000 ppm and 2% at 300 ppm (non-mating). Histopathology showed minimal to marked atrophy of seminiferous tubules with occasional failure of sperm release in all males at 7,500 and 10,000 ppm. Minimal atrophy of seminiferous tubules was also observed in 1/10 males in the 100 and 300 ppm groups, but not the 1,000 ppm group. Increased incidences of sloughed epithelial cells/residual bodies at 7,500 ppm and aspermia at 7,500 and 10,000 ppm were also observed. Sertoli cell vacuolation was noted, but this was also observed in controls and additional analysis by the pathology working group indicated that the Sertoli cell vacuolation likely resulted from the fixation process. In F2 males, there was minimal to-marked atrophy of seminiferous tubules occurred in 10/10 males, and secondary changes in the epididymis were observed at 7,500 ppm. Effects on sperm parameters were observed at $\geq$7,500 ppm. Due to technical difficulties, epididymal sperm data for F0 10,000 ppm males was not obtained, and F1 males in the 10,000 ppm group did not contain enough sperm for analysis. Changes that could be measured included significant decreases in sperm motility (F0 at 10,000 ppm, F2), epididymal sperm density (F2), total number of sperm per cauda (F2), number of sperm per mg testis (F1, F2), and total number of spermatids per testis (F1, F2). Abnormal sperm morphology was seen at $\geq$100 ppm in F2 males. No morphological changes in sperm morphology were observed in F0 or F1 males up to the highest dose examined (7,500 ppm). There were no effects on the pregnancy index of F0 animals during the production of the F1a, F1b, or F1c litters. Mated F1c animals in the 10,000 ppm group produced no litters, but there were no effects on pregnancy in the other dose groups. Mating of F2c animals resulted in significant reductions in the percentages of dams pregnant (F3a, F3b, F3c). Litter effects (e.g., litter size, live offspring, and pup body weights) were only observed at 7,500 ppm and above but were not consistent across generations or litters and were not clearly dose-dependent. Vaginal cytology showed differences in the amount of time spent in estrous in F0 dams at 10, 300, 1,000, and 7,500 ppm, compared with controls. In F1 dams, the cycle length was increased at 10,000 ppm; there were no changes in F2 dams. Delayed developmental parameters (e.g., vaginal opening, testicular descent, preputial separation) were observed in F1c offspring at $\geq$7,500 ppm. In F2c offspring, vaginal opening was delayed at 7,500 ppm, preputial separation was delayed at $\geq$ 10 ppm and testicular descent was delayed at $\geq$30 ppm. In F3c offspring, delays in these parameters were observed in the 7,500 ppm group only. Anogenital distance was significantly decreased in F1 litters at $\geq$7,500 ppm and at 7,500 ppm in F2 litters and in the F3a pups. In crossover mating experiments, where treated F1 females (10,000 ppm) were mated to naïve males there was an increase in pregnancies, but there were significant

decreases in live male pup weights, in AGD in males, and an increase in the ratio of female AGD/pup weight. F1 dam body weights were decreased (23.9%) at delivery. When treated F2 females (7,500 ppm) were mated to naïve males, there were significant decreases in male and female (and combined) pup weights both with and without adjustment for litter size and decreased AGD. Average dam body weights were also reduced at delivery. F1 males treated at 10,000 ppm mated to naïve females resulted in the production of no offspring and therefore significant decreases in the mating and pregnancy indices (they were zero) and a 97.9% decrease in the number of implantations were observed. In the F2 matings of males dosed with 7,500 ppm to naïve females, there were significant decreases in the pregnancy and fertility indices, and in male pup weights and implantation sites. HERO 5556685 reported a NOAEL of 100 ppm (4.8 mg/kg-day) for the combined F1 and F2 number of litters with reproductive tract malformations (RTMs). The LOAEL was 300 ppm (14 mg/kg-day). The authors did note that the relationship between the single RTMs in 10 and 30 ppm group F1 offspring and treatment cannot be ruled out. The BMD and BMDL values for RTM data were 257 and 169 ppm (F1 data), 233 and 77 ppm (F2 data), and 198 and 142 ppm (combined F1 and F2 data). The EC50 values for RTM were 2,771 ppm (F1), 1,480 ppm (F2), and 2,094 ppm (combined F1 and F2). The F1 1,000 ppm group may have been an outlier, and when that group is removed, the F1 EC50 is 1,406 ppm.

[25] 697710: In an in-utero developmental toxicity study, pregnant female Sprague-Dawley rats (8 animals/group) were administered 0, 10, 100, or 500 mg/kg body weight/day of di-(2-ethylhexyl) phthalate (DEHP), via gavage, from gestation day (GD) 11 to 21. The day on which vaginal plugs and/or sperm were detected in vaginal smears was designated as GD 0. Maternal clinical signs, abnormal behaviors, and body weights were recorded throughout the experimental period. On GD 21, half of the dams (n=4 dams/group) were euthanized and the male fetuses were extracted. The male fetuses were counted and weighed, and testes were isolated, fixed in Bouin's solution, and prepared for immunohistochemical analysis of androgen receptor expression. In addition, blood collected from the male fetuses was assessed for testosterone and luteinizing hormone (LH) levels. RNA was isolated from the testes of these male fetuses and gene expression was assessed by cDNA microarray analysis (of >16,000 genes) and validated by real-time PCR analysis (of 10 genes). The remaining 4 dams/group were allowed to give birth and at post-natal day (PND) 1, the offspring were counted (litter size), weighed, and sexed. Offspring body weights were measured weekly, and offspring were observed for abnormal clinical signs daily. On PND 13, male offspring were inspected for the number of areolae. Ten male offspring/group were weaned on PND 22 and euthanized on PND 63. Following euthanasia, a number of metrics were measured and recorded including anogenital distance, testis weight, epididymis weight, and prostate weight. Sperm from the right testis were extracted and counted prior to the determination of sperm motility and viability. Testes were also fixed in Bouin's solution, embedded in paraffin, and evaluated by immunohistochemistry to assess androgen receptor expression. In addition, blood collected from the euthanized offspring was assessed for testosterone and LH levels.Results for maternal observed clinical signs, abnormal behaviors, and body weights were not provided. Male fetus counts at GD 21 were not reported. Male fetus weights were significantly reduced by 24% in the 500 mg/kg body weight/day group, compared with the vehicle control group. Androgen receptor expression was decreased in a dose-dependent fashion with DEHP exposure. Serum levels of testosterone and LH were significantly reduced by 66% and 63%, respectively, in the highest dose group (500 mg/kg bw/day). From cDNA microarray analysis, it was determined that hundreds of genes were upregulated or downregulated in the testes by in-utero exposure to DEHP (100 or 500 mg/kg bw/day). Genes that were upregulated in a dose-dependent manner (for the 100 and 500 mg/kg bw/day groups) by >3-fold included signal transduction-related genes (Gabbr1, Grm2, Il17f, Mc4r, Prss1), transcription-related genes (Hand1, Onecut1), lipid metabolic process-related genes (Ttpa, Nr1h4), and steroid metabolic process-related genes (Nr1h4). Genes that were downregulated in a dose-dependent fashion by >3-fold included signal transduction-related genes (Tacr1, Ifng, Glra2), transcription-related genes (Nkx2-5), and lipid metabolic process-related genes (Erabp, Ins2). RT-PCR analysis validated the results of the cDNA microarray analysis, as the marker genes (Stc1 and Ard6) were detected to be altered according to both methods. Whereas Stc1 gene expression was significantly increased, Ard6 gene expression was significantly decreased in the 500 mg/kg bw/day group, compared to controls. Regarding the four dams/group that were allowed to give birth, litter sizes were not significantly different between vehicle- and DEHP-exposed dams. Offspring body weights measured on PND 1 and weekly between PND 1-63, as well as male-female ratios, were not provided. Offspring body weights on PND 63 were not significantly altered with DEHP exposure. It was determined that all male offspring (in the 500 mg/kg/day group) and four male offspring (in the 500 mg/kg bw/day group) exhibited hypospadias and undescended testes, respectively. The descending time and place of testes in the scrotum were also changed at 500 mg/kg/day Neither of these clinical signs was observed in animals of the other groups. Areolae were detected only in the 500 mg/kg/day group and the mean number of areolae per male was 9.06, which was significantly increased, compared to the vehicle group in which no areolae were detected. Anogenital distance was significantly reduced in only the 100 mg/kg bw/day group (20% decreased), compared to the control. No results were presented for androgen receptor expression as determined by immunohistochemical analysis. Serum levels of testosterone and LH decreased in a dose-dependent manner which became significant at 500 mg/kg/day. DEHP exposure. Relative testis, epididymis, and prostate weights were not altered with DEHP treatment in any of the groups; absolute weights were not reported. Sperm concentration and viability were significantly reduced with DEHP treatment, however, this change was not dose-dependent as it was only observed in the 10 and 500 mg/kg body weight/day groups. On the other hand, sperm motility was significantly reduced in all DEHP-dosed groups as compared to the control (reduced by 16% for 10 mg/kg, 13% for 100 mg/kg, and 46% for 500 mg/kg). No author-reported toxicity values were provided. Based on the data presented in the study, a LOAEL of 10 mg/kg bw/day DEHP was identified based on significantly reduced sperm motility.

[26] 697710: In an in-utero developmental toxicity study, pregnant female Sprague-Dawley rats (8 animals/group) were administered 0, 10, 100, or 500 mg/kg body weight/day of di-(2-ethylhexyl) phthalate (DEHP), via gavage, from gestation day (GD) 11 to 21. The day on which vaginal plugs and/or sperm were detected in vaginal smears was designated as GD 0. Maternal clinical signs, abnormal behaviors, and body weights were recorded throughout the experimental period. On GD 21, half of the dams (n=4 dams/group) were euthanized and the male fetuses were extracted. The male fetuses were counted and weighed, and testes were isolated, fixed in Bouin's solution, and prepared for immunohistochemical analysis of androgen receptor expression. In addition, blood collected from the male fetuses was assessed for testosterone and luteinizing hormone (LH) levels. RNA was isolated from the testes of these male fetuses and gene expression was assessed by cDNA microarray analysis (of >16,000 genes) and validated by real-time PCR analysis (of 10 genes). The remaining 4 dams/group were allowed to give birth and at post-natal day (PND) 1, the offspring were counted (litter size), weighed, and sexed. Offspring body weights were measured weekly, and offspring were observed for abnormal clinical signs daily. On PND 13, male offspring were inspected for the number of areolae. Ten male offspring/group were weaned on PND 22 and euthanized on PND 63. Following euthanasia, a number of metrics were measured and recorded including anogenital distance, testis weight, epididymis weight, and prostate weight. Sperm from the right testis were extracted and counted prior to the determination of sperm motility and viability. Testes were also fixed in Bouin's solution, embedded in paraffin, and evaluated by immunohistochemistry to assess androgen receptor expression. In addition, blood collected from the euthanized offspring was assessed for testosterone and LH levels.Results for maternal observed clinical signs, abnormal behaviors, and body weights were not provided. Male fetus counts at GD 21 were not reported. Male fetus weights were significantly reduced by 24% in the 500 mg/kg body weight/day group, compared with the vehicle control group. Androgen receptor expression was decreased in a dose-dependent fashion with DEHP exposure. Serum levels of testosterone and LH were significantly reduced by 66% and 63%, respectively, in the highest dose group (500 mg/kg bw/day). From cDNA microarray analysis, it was determined that hundreds of genes were upregulated or downregulated in the testes by in-utero exposure to DEHP (100 or 500 mg/kg bw/day). Genes that were upregulated in a dose-dependent manner (for the 100 and 500 mg/kg bw/day groups) by >3-fold included signal transduction-related genes (Gabbr1, Grm2, Il17f, Mc4r, Prss1), transcription-related genes (Hand1, Onecut1), lipid metabolic process-related genes (Ttpa, Nr1h4), and steroid metabolic process-related genes (Nr1h4). Genes that were downregulated in a dose-dependent fashion by >3-fold included signal transduction-related genes (Tacr1, Ifng, Glra2), transcription-related genes (Nkx2-5), and lipid metabolic process-related genes (Erabp, Ins2). RT-PCR analysis validated the results of the cDNA microarray analysis, as the marker genes (Stc1 and Ard6) were detected to be altered according to both methods. Whereas Stc1 gene expression was significantly increased, Ard6 gene expression was significantly decreased in the 500 mg/kg bw/day group, compared to controls. Regarding the four dams/group that were allowed to give birth, litter sizes were not significantly different between vehicle- and DEHP-exposed dams. Offspring body weights measured on PND 1 and weekly between PND 1-63, as well as male-female ratios, were not provided. Offspring body weights on PND 63 were not significantly altered with DEHP exposure. It was determined that all male offspring (in the 500 mg/kg/day group) and four male offspring (in the 500 mg/kg bw/day group) exhibited hypospadias and undescended testes, respectively. The descending time and place of testes in the scrotum were also changed at 500 mg/kg/day Neither of these clinical signs was observed in animals of the other groups. Areolae were detected only in the 500 mg/kg/day group and the mean number of areolae

per male was 9.06, which was significantly increased, compared to the vehicle group in which no areolae were detected. Anogenital distance was significantly reduced in only the 100 mg/kg bw/day group (20% decreased), compared to the control. No results were presented for androgen receptor expression as determined by immunohistochemical analysis. Serum levels of testosterone and LH decreased in a dose-dependent manner which became significant at 500 mg/kg/day. DEHP exposure. Relative testis, epididymis, and prostate weights were not altered with DEHP treatment in any of the groups; absolute weights were not reported. Sperm concentration and viability were significantly reduced with DEHP treatment, however, this change was not dose-dependent as it was only observed in the 10 and 500 mg/kg body weight/day groups. On the other hand, sperm motility was significantly reduced in all DEHP-dosed groups as compared to the control (reduced by 16% for 10 mg/kg, 13% for 100 mg/kg, and 46% for 500 mg/kg). No author-reported toxicity values were provided. Based on the data presented in the study, a LOAEL of 10 mg/kg bw/day DEHP was identified based on significantly reduced sperm motility.

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Systolic blood pressure index	Health Effect: Reproductive/Developmental-systolic blood pressure, hypertension-Non-cancer-Cardiovascular-systolic blood pressure, hypertension-Non-cancer. Outcome measure: Medical Records	Patients in clinics. Infant (0-1). United States; Oregon. Female, Male. Cohort (Prospective). PESS: Lifestage , Other PESS category specified in the reference. Lifestage PESS: Infants (birth through < 12 months). Premature infants with and without systolic hypertension. Recruitment and follow-up: ~2018.	Other (specify), Indices of DEHP related to IV administration and respiratory tube use Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure calculated based on IV fluid volume and respiratory tube exposure days.	Linear Regression. Confounders adjusted for: None.	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) for continuous DEHP IV exposure index (mL) and SBP index = 0.0004 (0.0001–0.0008). In a bivariate regression model, higher DEHP-containing IV fluid exposure was associated with a significantly higher SBP index (based on mean SBP ratio to the 95th percentile in the reference population)..	Jenkins et. al 2019 5625293 Low
Lung function (FEV1, FVC, FEV1% predicted, FVC% predicted)	Health Effect: Lung/Respiratory-Spirometry measurements (FEV1, FVC, FEV1% predicted, FVC% predicted)-Non-cancer. Outcome measure: Spirometry	General public, Fenceline communities. Adults (18+), Older Adults (65+). Taiwan; Kaohsiung County. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Older adults (age >= 65 years). Participants in the Dalinpu Community for Health Care cohort (2016-2018), Kaohsiung County, Taiwan, n=397 (159 men, 238 women). Dalinpu Community for Health Care (DCHC). 2016-2018.	Biomonitoring Biomonitoring matrix: Other (specify), forehead skin wipe Exposure Route: Dermal Absorption Acute (less than 24 hours) Exposure measured via forehead skin wide during cross-sectional study.	Linear Regression. Confounders adjusted for: age, gender, BMI, smoking, exercise, education.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (Beta) (95% CI) for a 1 log-unit increase in DEHP:FVC, full study population: −0.07 (−0.14, −0.003)FVC% predicted, full study population: −2.78 (−4.87, −0.69)FVC% predicted, participants age >= 60: −8.70 (−15.26, −0.88)FEV1% predicted, participants age >=60: −8.00 (−15.73, −0.26). Significant inverse associations with FVC and FVC% predicted in all study participants, results for FVC not significant when limited to participants age >=60. Significant inverse associations with FVC% predicted and FEV1% predicted among participants age >= 60..	Wang et. al 2021 7502437 Medium

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Forced Expiratory Volume in 1 second as % predicted (FEV1%)	Health Effect: Lung/Respiratory-Forced Expiratory Volume in 1s as % predicted value (FEV1%)-Non-cancer. Outcome measure: Spirometry (trained technicians, harmonized protocol)	General public. Middle childhood (6-11). France, Greece, Lithuania, Norway, Spain, and the UK. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 1033 healthy singleton children (489 girls, 544 boys) born between 2003 and 2009 with lung function evaluated at age 6-12 years. Participants were randomly selected from 6 prospective, general population birth cohorts in Europe (France, Greece, Lithuania, Norway, Spain, and the UK).. European Human Early-Life Exposome (HELIX) cohort. Children born 2003 to 2009.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured concurrently at age 6-12 years (significant).	Linear Regression. Confounders adjusted for: study center, child sex, child age, child height, parental country of birth, breastfeeding duration, season of conception, older siblings, parental education, maternal age, maternal pre-pregnancy BMI, postnatal passive smoking status, prenatal maternal active and passive smoking status, 22 co-exposures with p<0.20 and no excessive collinearity.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta (95% CI) for adjusted difference in FEV1% per IQR increase in childhood concentrations of the following DEHP phthalate measures (ug/g creatinine): -sum of DEHP metabolites = –1·3 (–2·3 to –0·3), p=0.014-MECPP = –1·3 (–2·3 to –0·2), p=0.016-MEHHP = –1·2 (–2·2 to –0·2), p=0.023-MEOPH = –1·3 (–2·3 to –0·3), p=0.0085. Both the sum of DEHP metabolites and 3 individual metabolites were associated with significantly poorer lung function in children.	Agier et. al 2019 5043613 High

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
percentage of fertilization rate, biochemical pregnancy, clinical pregnancy, live birth	Health Effect: Reproductive/Developmental-percentage of fertilization rate, biochemical pregnancy, failed clinical pregnancy, failed live birth-Non-cancer. Outcome measure: medical records	Patients in clinics. Adults (18+). Saudi Arabia; Riyadh. Female, Male. Cross-Sectional. PESS: Studies focusing on reproductive parameters. Females and their male partners recruited at the IVF clinic from a single hospital in Riyadh, Saudi Arabia (n=599 couples). March 2015-January 2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured 1) 2-3 days prior to follicle aspiration and 2) on the day of oocyte retrieval.	Logistic Regression. Confounders adjusted for: For models including data from the women only: age, BMI, cause of infertility, cotinine, creatinine, For models including data from both men and women: same variables for woman and men separately (e.g. female age, male age, female BMI, male BMI, etc.).	Lowest exposure concentration for a significant adverse health outcome response: continuous. %MEHP and absence of biochemical pregnancy, women only, RR (95% CI): 1.54 (1.02, 2.35)MEHP and absence of biochemical pregnancy, women and men, RR (95% CI): 1.35 (1.01, 1.81)%MEHP and absence of biochemical pregnancy, women and men, RR (95% CI): 1.55 (1.00, 2.40)%MEHP and absence of clinical pregnancy, women only, RR (95% CI): 1.75 (1.124, 2.72)MEHP and absence of clinical pregnancy, women and men, RR (95% CI): 1.56 (1.14, 2.14)%MEHP and absence of clinical pregnancy, women and men, RR (95% CI): 1.73 (1.09, 2.74)%MEHP and absence of live birth, women only, RR (95% CI): 1.69 (1.06, 2.7)MEHP and absence of live birth, women and men, RR (95% CI): 1.54 (1.11, 2.16)%MEHP and absence of live birth, women and men, RR (95% CI): 1.65 (1.01, 2.68)Among women with %MEHP>75th percentile, MEHHP and absence of biochemical pregnancy, RR (95% CI): 1.61 (1.08, 2.41)Among women with %MEHP>75th percentile, MEOHP and absence of biochemical pregnancy, RR (95% CI): 1.87 (1.05, 3.33)Among women with %MEHP>75th percentile, MEHP and absence of biochemical pregnancy, RR (95% CI): 1.78 (1.01, 3.13)Among women with %MEHP>75th percentile, summary DEHP and absence of biochemical pregnancy, RR (95% CI): 1.94 (1.06, 3.55)Among women with %MEHP>75th percentile, MEHHP and absence of clinical pregnancy, RR (95% CI): 1.73 (1.128, 2.65)Among women with %MEHP>75th percentile, MEOHP and absence of clinical pregnancy, RR (95% CI): 2.48 (1.278, 4.82)Among women with %MEHP>75th percentile, MEHP and absence of clinical pregnancy, RR (95% CI): 2.47 (1.29, 4.75)Among women with %MEHP>75th percentile, summary DEHP and absence of clinical pregnancy, RR (95% CI): 2.63 (1.309, 5.28)Among women with %MEHP>75th percentile, MEHHP and absence of live birth, RR (95% CI): 1.59 (1.01, 2.5)Among women with %MEHP>75th percentile, MEOHP and absence of live birth, RR (95% CI): 2.37 (1.17, 4.81)Among women with %MEHP>75th percentile, MEHP and absence of live birth, RR (95% CI): 2.25 (1.13, 4.47)Among women with %MEHP>75th percentile, summary DEHP and absence of live birth, RR (95% CI): 2.45 (1.17, 5.13). Significant associations between MEHP and %MEHP with biochemical pregnancy, absence of clinical pregnancy, and absence of live birth were noted; although some women-only models did not	Al-Saleh et. al 2019 5499157 High

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
percentage of fertilization rate, biochemical pregnancy, clinical pregnancy, live birth	Health Effect: Reproductive/Developmental-percentage of fertilization rate, biochemical pregnancy, failed clinical pregnancy, failed live birth-Non-cancer. Outcome measure: medical records	Patients in clinics. Adults (18+). Saudi Arabia; Riyadh. Female, Male. Cross-Sectional. PESS: Studies focusing on reproductive parameters. Females and their male partners recruited at the IVF clinic from a single hospital in Riyadh, Saudi Arabia (n=599 couples). March 2015-January 2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured 1) 2-3 days prior to follicle aspiration and 2) on the day of oocyte retrieval.	Logistic Regression. Confounders adjusted for: For models including data from the women only: age, BMI, cause of infertility, cotinine, creatinine, For models including data from both men and women: same variables for woman and men separately (e.g. female age, male age, female BMI, male BMI, etc.).	Lowest exposure concentration for a significant adverse health outcome response: continuous. %MEHP and absence of biochemical pregnancy, women only, RR (95% CI): 1.54 (1.02, 2.35)MEHP and absence of biochemical pregnancy, women and men, RR (95% CI): 1.35 (1.01, 1.81)%MEHP and absence of biochemical pregnancy, women and men, RR (95% CI): 1.55 (1.00, 2.40)%MEHP and absence of clinical pregnancy, women only, RR (95% CI): 1.75 (1.124, 2.72)MEHP and absence of clinical pregnancy, women and men, RR (95% CI): 1.56 (1.14, 2.14)%MEHP and absence of clinical pregnancy, women and men, RR (95% CI): 1.73 (1.09, 2.74)%MEHP and absence of live birth, women only, RR (95% CI): 1.69 (1.06, 2.7)MEHP and absence of live birth, women and men, RR (95% CI): 1.54 (1.11, 2.16)%MEHP and absence of live birth, women and men, RR (95% CI): 1.65 (1.01, 2.68)Among women with %MEHP>75th percentile, MEHHP and absence of biochemical pregnancy, RR (95% CI): 1.61 (1.08, 2.41)Among women with %MEHP>75th percentile, MEOHP and absence of biochemical pregnancy, RR (95% CI): 1.87 (1.05, 3.33)Among women with %MEHP>75th percentile, MEHP and absence of biochemical pregnancy, RR (95% CI): 1.78 (1.01, 3.13)Among women with %MEHP>75th percentile, summary DEHP and absence of biochemical pregnancy, RR (95% CI): 1.94 (1.06, 3.55)Among women with %MEHP>75th percentile, MEHHP and absence of clinical pregnancy, RR (95% CI): 1.73 (1.128, 2.65)Among women with %MEHP>75th percentile, MEOHP and absence of clinical pregnancy, RR (95% CI): 2.48 (1.278, 4.82)Among women with %MEHP>75th percentile, MEHP and absence of clinical pregnancy, RR (95% CI): 2.47 (1.29, 4.75)Among women with %MEHP>75th percentile, summary DEHP and absence of clinical pregnancy, RR (95% CI): 2.63 (1.309, 5.28)Among women with %MEHP>75th percentile, MEHHP and absence of live birth, RR (95% CI): 1.59 (1.01, 2.5)Among women with %MEHP>75th percentile, MEOHP and absence of live birth, RR (95% CI): 2.37 (1.17, 4.81)Among women with %MEHP>75th percentile, MEHP and absence of live birth, RR (95% CI): 2.25 (1.13, 4.47)Among women with %MEHP>75th percentile, summary DEHP and absence of live birth, RR (95% CI): 2.45 (1.17, 5.13). Significant associations between MEHP and %MEHP with biochemical pregnancy, absence of clinical pregnancy, and absence of live birth were noted; although some women-only models did not	Al-Saleh et. al 2019 5499157 High

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Biochemical pregnancy	Health Effect: Reproductive/Developmental-Biochemical pregnancy-Non-cancer. Outcome measure: Not reported	Patients in clinics, Pregnant people. Adults (18+). Saudi Arabia. Female, Male. Cross-Sectional. PESS: Studies focusing on reproductive parameters. 599 couples underwent in vitro fertilization treatment.. 2015-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Not reported.	Multivariate binomial regression. Confounders adjusted for: Age, BMI, cause of infertility, ln-cotinine, ln-creatinine.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. RR (95% CI) for MECPP: 0.804 (0.657, 0.984); RR (95% CI) for MEOHP: 0.8 (0.655, 0.976); RR (95% CI) for total DEHP metabolites: 0.795 (0.638, 0.991). Significantly decreased probability were reported for MECCP, MEOHP, and total DEHP metabolites in men..	Al-Saleh et. al 2019 5043455 Medium
Clinical pregnancy	Health Effect: Reproductive/Developmental-Clinical pregnancy-Non-cancer. Outcome measure: Not reported	Patients in clinics, Pregnant people. Adults (18+). Saudi Arabia. Female, Male. Cross-Sectional. PESS: Studies focusing on reproductive parameters. 599 couples underwent in vitro fertilization treatment.. 2015-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Not reported.	Multivariate binomial regression. Confounders adjusted for: Age, BMI, cause of infertility, ln-cotinine, ln-creatinine.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Men: RR (95% CI) for MECPP: 0.797 (0.645, 0.987); RR (95% CI) for MEOHP: 0.804 (0.652, 0.991). Women: RR (95% CI) for MEHP: 1.321 (1.001, 1.743). Significantly decreased probability were reported for MECCP and MEOHP in men. A significant increase of probability was reported for MEHP in women..	Al-Saleh et. al 2019 5043455 Medium
Poor fertilization rate	Health Effect: Reproductive/Developmental-Fertilization rate-Non-cancer. Outcome measure: Not reported	Patients in clinics, Pregnant people. Adults (18+). Saudi Arabia. Female, Male. Cross-Sectional. PESS: Studies focusing on reproductive parameters. 599 couples underwent in vitro fertilization treatment.. 2015-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Not reported.	Multivariate binomial regression. Confounders adjusted for: Age, BMI, cause of infertility, ln-cotinine, ln-creatinine.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. RR (95% CI) for CAT x MEOHP interaction = 1.74 (1.08, 2.82). RR (95% CI) for association between % fertilization rate and CAT x MEOHP interaction = 1.74 (1.08, 2.82), indicated that the adverse main effect of CAT on % fertilization increased by 74% with increasing levels of MEOHP; there was no main effect of MEOHP on fertilization rate..	Al-Saleh et. al 2019 5043455 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Free T4	Health Effect: Thyroid-Hormone levels: thyroid-stimulating hormone (TSH), free triiodothyronine (T3), and free thyroxine (T4)-Non-cancer. Outcome measure: Serum samples analyzed by chemi-luminescent assays	General public. Adults (18+). Canada; Montreal. Male. Cross-Sectional. PESS: Studies focusing on reproductive parameters. 153 men in Montreal, Canada. 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Un-clear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured concur-rently with outcome.	Linear Regression. Con-founders adjusted for: university graduate, age≥30, BMI≥25, North American birthplace, income≥60,000, smoking status.	Lowest exposure concentration for a significant ad-verse health outcome response: continuous; median (25th-75th percentiles) MECPP = 13.00 ug/L (6.00-25.00 ug/L). Beta (95% CI) per 10-fold increase in MECPP: 0.98 (0.02, 1.94). Significant positive associations between MECPP with free T4 (MECPP p = 0.05) and near significant associations between DEHP metabolites and free T3 (MECPP p =0.08, MEHP p=0.05, MEHHP p=0.07, MEOHP p=0.07). No other significant results re-ported for hormones or for sperm parameters..	Albert et. al 2018 4728683 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child age 11 motor function	Health Effect: Neurological/Behavioral- Age 11 motor skills-Non-cancer. Outcome measure: Short form of the Bruininks- Oseretsky Test of Motor Proficiency, 2nd edition (BOT-2)	Pregnant people. Preschool (3-5), Middle childhood (6-11), Adults (18+). U.S.; New York City, northern Manhattan, South Bronx. Female, Male. Cohort (Prospective). PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Columbia Center for Children's Environmental Health (CCCEH) (recruitment 1999-2006, follow-up through age 11), United States, New York, overall n=209 mother-child pairs (116 girls, 93 boys). Sample size for the relevant metabolites varied based on measurement time point in children.. Columbia Center for Children's Environmental Health (CCCEH) cohort. Recruitment: delivery 1999-2006 and 3rd trimester spot urine; Follow-up child age 11 year visit..	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy third trimester.	Linear Regression. Confounders adjusted for: prenatal specific gravity, maternal ethnicity, prenatal maternal demoralization, prenatal maternal alcohol consumption, quality of the home environment (HOME score), child BMI z-score at age 11, and child's age in months at BOT-2 administration.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Age 3 boys phthalate exposures and BOT-2 fine motor composite score: ln sum(DEHP) (b= - 1.30; 95% CI: [-2.34, -0.26]).Age 7 boys phthalate exposure and BOT-2 fine motor composite score: ln sum(DEHP) (b = –0.96; 95% CI = [–1.79, –0.13]).Age 7 boys phthalate exposure and BOT-2 total composite score: ln sum(DEHP) (b = -1.30; 95% CI: [-2.56, -0.03]).. Prenatal and age 5 sum (DEHP) metabolites were not significantly associated with BOT-2 scores in either boys or girls. Among boys, age 3 ln sum(DEHP) and age 7 ln sum(DEHP) were significantly inversely associated with BOT-2 fine motor composite score, and age 7 ln sum(DEHP) was additionally inversely associated with BOT-2 total composite score. In sensitivity analyses examining individual DEHP metabolites (Table S5a), among boys, age 3 and age 7 MECPP was inversely associated with BOT-2 total composite scores, while age 3 and age 7 MEHHP, MECPP, and MEOHP were inversely associated with BOT-2 fine motor composite scores. Among girls, none of the age 3 or age 7 phthalate metabolites (either as sum(DEHP) or as individual metabolites) were associated with any outcomes..	Balalian et. al 2019 5039985 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child age 11 motor function	Health Effect: Neurological/Behavioral- Age 11 motor skills-Non-cancer. Outcome measure: Short form of the Bruininks- Oseretsky Test of Motor Proficiency, 2nd edition (BOT-2)	Pregnant people. Preschool (3-5), Middle childhood (6-11), Adults (18+). U.S.; New York City, northern Manhattan, South Bronx. Female, Male. Cohort (Prospective). PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Columbia Center for Children's Environmental Health (CCCEH) (recruitment 1999-2006, follow-up through age 11), United States, New York, overall n=209 mother-child pairs (116 girls, 93 boys). Sample size for the relevant metabolites varied based on measurement time point in children.. Columbia Center for Children's Environmental Health (CCCEH) cohort. Recruitment: delivery 1999-2006 and 3rd trimester spot urine; Follow-up child age 11 year visit..	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy third trimester.	Linear Regression. Confounders adjusted for: prenatal specific gravity, maternal ethnicity, prenatal maternal demoralization, prenatal maternal alcohol consumption, quality of the home environment (HOME score), child BMI z-score at age 11, and child's age in months at BOT-2 administration.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Age 3 boys phthalate exposures and BOT-2 fine motor composite score: ln sum(DEHP) (b= - 1.30; 95% CI: [-2.34, -0.26]).Age 7 boys phthalate exposure and BOT-2 fine motor composite score: ln sum(DEHP) (b = –0.96; 95% CI = [–1.79, –0.13]).Age 7 boys phthalate exposure and BOT-2 total composite score: ln sum(DEHP) (b = -1.30; 95% CI: [-2.56, -0.03]).. Prenatal and age 5 sum (DEHP) metabolites were not significantly associated with BOT-2 scores in either boys or girls. Among boys, age 3 ln sum(DEHP) and age 7 ln sum(DEHP) were significantly inversely associated with BOT-2 fine motor composite score, and age 7 ln sum(DEHP) was additionally inversely associated with BOT-2 total composite score. In sensitivity analyses examining individual DEHP metabolites (Table S5a), among boys, age 3 and age 7 MECPP was inversely associated with BOT-2 total composite scores, while age 3 and age 7 MEHHP, MECPP, and MEOHP were inversely associated with BOT-2 fine motor composite scores. Among girls, none of the age 3 or age 7 phthalate metabolites (either as sum(DEHP) or as individual metabolites) were associated with any outcomes..	Balalian et. al 2019 5039985 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Age at thelarche (months)	Health Effect: Reproductive/Developmental-Timing of puberty (thelarche)-Non-cancer. Outcome measure: Clinical Tanner staging assessment	General public. Middle childhood (6-11), Teens (12-17), Adults (18+). United States; Salinas Valley, California. Female. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Mothers and their children from the CHAMACOS study (n=159 boys; n=179 girls). The Center for the Health Assessment of Mothers and Children of Salinas (CHAMACOS). Recruitment: 1999-2000; Follow-up 9-13 years later.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Multivariable accelerated failure time (AFT). Confounders adjusted for: maternal education, years in United States, family poverty during pregnancy, Diet Quality Index during pregnancy, maternal prepregnancy BMI.	Lowest exposure concentration for a significant adverse health outcome response: continuous (central tendency not provided for Sum DEHP metabolites). Mean shift in months (95% CI) per log2 increase in sum DEHPAll girls: 2.5 (0.7, 4.3)Normal weight girls: 2.6 (0.8, 4.4)Overweight/obese girls: 4.9 (1.7, 8.2). Significant positive association for all girls, and stratified by normal and overweight. p for interaction = 0.57.	Berger et. al 2018 4829221 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Age at menarche (months)	Health Effect: Reproductive/Developmental-Timing of puberty (pubarche, menarche, gonadarche)-Non-cancer. Outcome measure: Clinical Tanner staging assessment	General public. Middle childhood (6-11), Teens (12-17), Adults (18+). United States; Salinas Valley, California. Female. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Mothers and their children from the CHAMACOS study (n=159 boys; n=179 girls). The Center for the Health Assessment of Mothers and Children of Salinas (CHAMACOS). Recruitment: 1999-2000; Follow-up 9-13 years later.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Multivariable accelerated failure time (AFT). Confounders adjusted for: maternal education, years in United States, family poverty during pregnancy, Diet Quality Index during pregnancy, maternal prepregnancy BMI.	Lowest exposure concentration for a significant adverse health outcome response: continuous (central tendency not provided for Sum DEHP metabolites). Mean shift in months (95% CI) per log2 increase in sum DEHPAll girls: 2.5 (1.1, 4.1)Normal weight girls: 2.7 (0.7, 4.6)Overweight/obese girls: 3.2 (0.9, 5.5). Significant positive association for all girls, and stratified by normal and overweight. p for interaction = 0.96.	Berger et. al 2018 4829221 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Age at thelarche (months)	Health Effect: Reproductive/Developmental-Timing of puberty (thelarche)-Non-cancer. Outcome measure: Clinical Tanner staging assessment	General public. Middle childhood (6-11), Teens (12-17), Adults (18+). United States; Salinas Valley, California. Female. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Mothers and their children from the CHAMACOS study (n=159 boys; n=179 girls). The Center for the Health Assessment of Mothers and Children of Salinas (CHAMACOS). Recruitment: 1999-2000; Follow-up 9-13 years later.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Multivariable accelerated failure time (AFT). Confounders adjusted for: maternal education, years in United States, family poverty during pregnancy, Diet Quality Index during pregnancy, maternal prepregnancy BMI.	Lowest exposure concentration for a significant adverse health outcome response: continuous; median = 9.2 ng/mL. Mean shift in months (95% CI) per log2 increase in MBzPAll girls: 1.9 (0.2, 3.6)Overweight/obese girls: 3.9 (1.2, 6.7). Significant positive association for all girls, and for overweight/obese girls in stratified analyses. p for interaction = 0.58.	Berger et. al 2018 4829221 Low

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Diethylhexyl Phthalate

Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP); Mono-(2-ethyl-5-carboxypentyl)phthalate (MECPP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Age at gonadarche (months)	Health Effect: Reproductive/Developmental-Timing of puberty (pubarche, menarche, gonadarche)-Non-cancer. Outcome measure: Clinical Tanner staging assessment	General public. Middle childhood (6-11), Teens (12-17), Adults (18+). United States; Salinas Valley, California. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Mothers and their children from the CHAMACOS study (n=159 boys; n=179 girls). The Center for the Health Assessment of Mothers and Children of Salinas (CHAMACOS). Recruitment: 1999-2000; Follow-up 9-13 years later.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Multivariable accelerated failure time (AFT). Confounders adjusted for: maternal education, years in United States, family poverty during pregnancy, Diet Quality Index during pregnancy, maternal prepregnancy BMI.	Lowest exposure concentration for a significant adverse health outcome response: continuous; median = 9.2 ng/mL. Mean shift in months (95% CI) per log2 increase in MBzPAll boys: -3.1 (-5.2, -0.9)Overweight/obese boys: -4.3 (-6.8, -1.8). Significant negative association for all boys, and for overweight/obese boys in stratified analyses. p for interaction = 0.07.	Berger et. al 2018 4829221 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Age at pubarche (months)	Health Effect: Reproductive/Developmental-Timing of puberty (pubarche, menarche, gonadarche)-Non-cancer. Outcome measure: Clinical Tanner staging assessment	General public. Middle childhood (6-11), Teens (12-17), Adults (18+). United States; Salinas Valley, California. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Mothers and their children from the CHAMACOS study (n=159 boys; n=179 girls). The Center for the Health Assessment of Mothers and Children of Salinas (CHAMACOS). Recruitment: 1999-2000; Follow-up 9-13 years later.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Multivariable accelerated failure time (AFT). Confounders adjusted for: maternal education, years in United States, family poverty during pregnancy, Diet Quality Index during pregnancy, maternal prepregnancy BMI.	Lowest exposure concentration for a significant adverse health outcome response: continuous; median = 9.2 ng/mL. Mean shift in months (95% CI) per log2 increase in MBzPNormal weight boys: 3.5 (0.4, 6.5)Overweight/obese boys: -3.6 (-5.7, -1.4)Non-significant, near-zero results for girls.. Significant negative association for boys when stratified by weight status, but non-significant negative in all boys. p for interaction = <0.01.	Berger et. al 2018 4829221 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Age at pubarche (months)	Health Effect: Reproductive/Developmental-Timing of puberty (pubarche, menarche, gonadarche)-Non-cancer. Outcome measure: Clinical Tanner staging assessment	General public. Middle childhood (6-11), Teens (12-17). United States; Salinas Valley, California. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Mothers and their children from the CHAMACOS study (n=159 boys; n=179 girls). The Center for the Health Assessment of Mothers and Children of Salinas (CHAMACOS). Recruitment: 1999-2000; Follow-up 9-13 years later.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Multivariable accelerated failure time (AFT). Confounders adjusted for: maternal education, years in United States, family poverty during pregnancy, Diet Quality Index during pregnancy, maternal prepregnancy BMI.	Lowest exposure concentration for a significant adverse health outcome response: continuous (central tendency not provided for Sum DEHP metabolites). Mean shift in months (95% CI) per log2 increase in sum DEHPOverweight/obese boys: -3.8 (-6.7, -0.7)No significant results for girls. Significant negative association for overweight/obese boys, but not in normal weight boys or in all boys. Positive non-significant associations were reported in girls. p for interaction = 0.03.	Berger et. al 2018 4829221 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Age at gonadarche (months)	Health Effect: Reproductive/Developmental-Timing of puberty (pubarche, menarche, gonadarche)-Non-cancer. Outcome measure: Clinical Tanner staging assessment	General public. Middle childhood (6-11), Teens (12-17), Adults (18+). United States; Salinas Valley, California. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Mothers and their children from the CHAMACOS study (n=159 boys; n=179 girls). The Center for the Health Assessment of Mothers and Children of Salinas (CHAMACOS). Recruitment: 1999-2000; Follow-up 9-13 years later.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Multivariable accelerated failure time (AFT). Confounders adjusted for: maternal education, years in United States, family poverty during pregnancy, Diet Quality Index during pregnancy, maternal prepregnancy BMI.	Lowest exposure concentration for a significant adverse health outcome response: continuous (central tendency not provided for Sum DEHP metabolites). Mean shift in months (95% CI) per log2 increase in Sum DEHPOverweight/obese boys: -6.3 (-10.7, -1.8). Significant negative association for overweight/obese boys, but not in normal weight boys or for all boys. p for interaction = <0.01.	Berger et. al 2018 4829221 Medium
Age at menarche	Health Effect: Reproductive/Developmental-Age at menarche development-Non-cancer. Outcome measure: Self-report of first menstrual bleeding	General public. Middle childhood (6-11), Teens (12-17). Chile; Santiago. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Subset of girls from the longitudinal Growth and Obesity Cohort Study (GOCS) (Enrolled n = 200, used in analysis n=200). Growth and Obesity Cohort Study (GOCS). Recruitment: 2006; Follow-up: Starting in 2009.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured prior to onset of breast development and during adolescence (B1 and B4, respectively).	Multivariable accelerated failure time (AFT). Confounders adjusted for: BMI Z-score, maternal education.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Sum of DEHP metabolites HR associated with log (ng/mL) increase in biomarker stratified by Tanner stage: HR (95% CI)B1: 0.77 (0.60, 0.98)B4: 1.24 (0.97, 1.57). Statistically significant association between sum of DEHP metabolites and age at menarche was reported.	Binder et. al 2018 4728665 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Age at menarche	Health Effect: Reproductive/Developmental-Age at menarche development-Non-cancer. Outcome measure: Self-report of first menstrual bleeding	General public. Middle childhood (6-11), Teens (12-17). Chile; Santiago. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Subset of girls from the longitudinal Growth and Obesity Cohort Study (GOCS) (Enrolled n = 200, used in analysis n=200). Growth and Obesity Cohort Study (GOCS). Recruitment: 2006; Follow-up: Starting in 2009.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured prior to onset of breast development and during adolescence (B1 and B4, respectively).	Multivariable accelerated failure time (AFT). Confounders adjusted for: BMI Z-score, maternal education.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. MEHHP metabolite HR associated with log (ng/mL) increase in biomarker stratified by Tanner stage: HR (95% CI)B1: 0.77 (0.62, 0.96)B4: 1.22 (0.98, 1.51). Statistically significant association between MEHHP metabolite and age at menarche for B1 was reported.	Binder et. al 2018 4728665 Medium
Age at menarche	Health Effect: Reproductive/Developmental-Age at menarche development-Non-cancer. Outcome measure: Self-report of first menstrual bleeding	General public. Middle childhood (6-11), Teens (12-17). Chile; Santiago. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Subset of girls from the longitudinal Growth and Obesity Cohort Study (GOCS) (Enrolled n = 200, used in analysis n=200). Growth and Obesity Cohort Study (GOCS). Recruitment: 2006; Follow-up: Starting in 2009.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured prior to onset of breast development and during adolescence (B1 and B4, respectively).	Multivariable accelerated failure time (AFT). Confounders adjusted for: BMI Z-score, maternal education.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. MEHP metabolite HR associated with log (ng/mL) increase in biomarker stratified by Tanner stage: HR (95% CI)B1: 0.80 (0.65, 0.98)B4: 1.20 (0.98, 1.47). Statistically significant association between MEHP metabolite and age at menarche for B1 was reported.	Binder et. al 2018 4728665 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Age at menarche	Health Effect: Reproductive/Developmental-Age at menarche development-Non-cancer. Outcome measure: Self-report of first menstrual bleeding	General public. Middle childhood (6-11), Teens (12-17). Chile; Santiago. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Subset of girls from the longitudinal Growth and Obesity Cohort Study (GOCS) (Enrolled n = 200, used in analysis n=200). Growth and Obesity Cohort Study (GOCS). Recruitment: 2006; Follow-up: Starting in 2009.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured prior to onset of breast development and during adolescence (B1 and B4, respectively).	Multivariable accelerated failure time (AFT). Confounders adjusted for: BMI Z-score, maternal education.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. MEOHP metabolite HR associated with log (ng/mL) increase in biomarker stratified by Tanner stage: HR (95% CI)B1: 0.78 (0.63, 0.97)B4: 1.20 (0.96, 1.50). Statistically significant association between MEHP metabolite and age at menarche for B1 was reported.	Binder et. al 2018 4728665 Medium
dihydrotestosterone/total testosterone ratio	Health Effect: Reproductive/Developmental-Sex hormone levels (luteinizing hormone, follicle-stimulating hormone, sex hormone binding globulin, inhibinB, dehydroepiandrosterone, dehydroepiandrosterone sulfate, androstenedione, estrone, estradiol, total testosterone, free testosterone, dihydrotestosterone, dihydrotestosterone/total testosterone ratio, estradiol/total testosterone ratio, estradiol/estrone ratio)-Non-cancer. Outcome measure: measured in serum	Patients in clinics. Adults (18+), Older Adults (65+). Taiwan. Male. Cross-Sectional. PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition). Lifestage PESS: Older adults (age >= 65 years). elderly males from National Cheng Kung University Hospital: Taiwan, 207 elderly males with diagnosed BPH, 2015-2017. 2015-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring on the same day they were diagnosed.	Linear Regression. Confounders adjusted for: age, body mass index (modeled continuously), and season during which the blood was collected for hormone analysis. Total testosterone and estradiol were additionally adjusted for SHBG. Urinary phthalate metabolites and 8-OHdG were additionally adjusted for urinary creatinine (liner).	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficients for: MEHP (95% CI): 1.10 (1.02, 1.18);MEHHP (95% CI): 1.11 (1.02, 1.20);MEOHP (95% CI): 1.17 (1.07, 1.28);MECPP (95% CI): 1.15 (1.04, 1.28). Multivariate regression coefficients showed significant positive associations between the results for DHT:TT ratio and MEHP, MEHHP, MEOHP, and MECPP..	Chang et. al 2019 5499417 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
estradiol/total testosterone (E2:TT) ratio	Health Effect: Reproductive/Developmental-Sex hormone levels (luteinizing hormone, follicle-stimulating hormone, sex hormone binding globulin, inhibinB, dehydroepiandrosterone, dehydroepiandrosterone sulfate, androstenedione, estrone, estradiol, total testosterone, free testosterone, dihydrotestosterone, dihydrotestosterone/total testosterone ratio, estradiol/total testosterone ratio, estradiol/estrone ratio)-Non-cancer. Outcome measure: measured in serum	Patients in clinics. Adults (18+), Older Adults (65+). Taiwan. Male. Cross-Sectional. PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition). Lifestage PESS: Older adults (age >= 65 years). elderly males from National Cheng Kung University Hospital: Taiwan, 207 elderly males with diagnosed BPH, 2015-2017. 2015-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring on the same day they were diagnosed.	Linear Regression. Confounders adjusted for: age, body mass index (modeled continuously), and season during which the blood was collected for hormone analysis. Total testosterone and estradiol were additionally adjusted for SHBG. Urinary phthalate metabolites and 8-OHdG were additionally adjusted for urinary creatinine (liner).	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficients for: MEHP (95% CI): 1.24 (1.12, 1.39);MEHHP (95% CI): 1.17(1.06, 1.29);MEOHP (95% CI): 1.17 (1.04, 1.32);MECPP (95% CI): 1.21 (1.08, 1.36). Multivariate regression coefficients showed significant positive associations between the results for E2:TT ratio and MEHP, MEHHP, MEOHP, and MECPP..	Chang et. al 2019 5499417 Medium
estradiol/estrone (E2:E1) ratio	Health Effect: Reproductive/Developmental-Sex hormone levels (luteinizing hormone, follicle-stimulating hormone, sex hormone binding globulin, inhibinB, dehydroepiandrosterone, dehydroepiandrosterone sulfate, androstenedione, estrone, estradiol, total testosterone, free testosterone, dihydrotestosterone, dihydrotestosterone/total testosterone ratio, estradiol/total testosterone ratio, estradiol/estrone ratio)-Non-cancer. Outcome measure: measured in serum	Patients in clinics. Adults (18+), Older Adults (65+). Taiwan. Male. Cross-Sectional. PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition). Lifestage PESS: Older adults (age >= 65 years). elderly males from National Cheng Kung University Hospital: Taiwan, 207 elderly males with diagnosed BPH, 2015-2017. 2015-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring on the same day they were diagnosed.	Linear Regression. Confounders adjusted for: age, body mass index (modeled continuously), and season during which the blood was collected for hormone analysis. Total testosterone and estradiol were additionally adjusted for SHBG. Urinary phthalate metabolites and 8-OHdG were additionally adjusted for urinary creatinine (liner).	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficients for: MEHP (95% CI): 1.17 (1.05, 1.31);MEHHP (95% CI): 1.14(1.04, 1.26);MEOHP (95% CI): 1.13 (1.03, 1.24);MECPP (95% CI): 1.14 (1.02, 1.27). Multivariate regression coefficients showed significant positive associations between the results for E2:E1 ratio and MEHP, MEHHP, MEOHP, and MECPP..	Chang et. al 2019 5499417 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
luteinizing hormone; InhibinB; dehydroepiandrosterone; inducible nitric oxide synthetase	Health Effect: Reproductive/Developmental-Sex hormone levels (luteinizing hormone, follicle-stimulating hormone, sex hormone binding globulin, inhibinB, dehydroepiandrosterone, dehydroepiandrosterone sulfate, androstenedione, estrone, estradiol, total testosterone, free testosterone, dihydrotestosterone, dihydrotestosterone/total testosterone ratio, estradiol/total testosterone ratio, estradiol/estrone ratio)-Non-cancer-Other (please specify below) (Oxidative stress/Inflammation)-Oxidative stress/Inflammation (malondialdehyde, inducible nitric oxide synthetase, 8-hydroxy-2'-deoxyguanosine)-Non-cancer-Reproductive/Developmental-benign prostatic hyperplasia (prostate specific antigen, prostate volume)-Non-cancer. Outcome measure: measured in serum	Patients in clinics. Adults (18+), Older Adults (65+). Taiwan. Male. Cross-Sectional. PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition). Lifestage PESS: Older adults (age >= 65 years). elderly males from National Cheng Kung University Hospital: Taiwan, 207 elderly males with diagnosed BPH, 2015-2017. 2015-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring on the same day they were diagnosed.	Linear Regression. Confounders adjusted for: age, body mass index (modeled continuously), and season during which the blood was collected for hormone analysis. Total testosterone and estradiol were additionally adjusted for SHBG. Urinary phthalate metabolites and 8-OHdG were additionally adjusted for urinary creatinine (liner).	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficients for: LH (95% CI): 0.89 (0.84, 0.95); InhibinB (95% CI): 0.92 (0.85, 0.98); DHEA (95% CI): 1.48 (1.31, 1.66); iNOS (95% CI): 1.44 (1.17, 1.77). Multivariate regression coefficients showed significant positive associations between the results for LH, InhibinB, DHEA, and iNOS, but showed non-significant results for FSH, SHBG, AD, E1, E2, TT, FT, DHT, MDA, 8-OHdG, PSA, and prostate volume outcomes..	Chang et. al 2019 5499417 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
estradiol	Health Effect: Reproductive/Developmental-Sex hormone levels (luteinizing hormone, follicle-stimulating hormone, sex hormone binding globulin, inhibinB, dehydroepiandrosterone, dehydroepiandrosterone sulfate, androstenedione, estrone, estradiol, total testosterone, free testosterone, dihydrotestosterone, dihydrotestosterone/total testosterone ratio, estradiol/total testosterone ratio, estradiol/estrone ratio)-Non-cancer. Outcome measure: measured in serum	Patients in clinics. Adults (18+), Older Adults (65+). Taiwan. Male. Cross-Sectional. PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition). Lifestage PESS: Older adults (age >= 65 years). elderly males from National Cheng Kung University Hospital: Taiwan, 207 elderly males with diagnosed BPH, 2015-2017. 2015-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring on the same day they were diagnosed.	Linear Regression. Confounders adjusted for: age, body mass index (modeled continuously), and season during which the blood was collected for hormone analysis. Total testosterone and estradiol were additionally adjusted for SHBG. Urinary phthalate metabolites and 8-OHdG were additionally adjusted for urinary creatinine (liner).	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficients for: MEHP (95% CI): 1.22 (1.11, 1.35);MEHHP (95% CI): 1.15 (1.06, 1.26);MEOHP (95% CI): 1.16 (1.04, 1.30);MECPP (95% CI): 1.19 (1.19, 1.32). Multivariate regression coefficients showed significant positive associations between the results for E2 and MEHP, MEHHP, MEOHP, and MECPP..	Chang et. al 2019 5499417 Medium
estrone	Health Effect: Reproductive/Developmental-Sex hormone levels (luteinizing hormone, follicle-stimulating hormone, sex hormone binding globulin, inhibinB, dehydroepiandrosterone, dehydroepiandrosterone sulfate, androstenedione, estrone, estradiol, total testosterone, free testosterone, dihydrotestosterone, dihydrotestosterone/total testosterone ratio, estradiol/total testosterone ratio, estradiol/estrone ratio)-Non-cancer. Outcome measure: measured in serum	Patients in clinics. Adults (18+), Older Adults (65+). Taiwan. Male. Cross-Sectional. PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition). Lifestage PESS: Older adults (age >= 65 years). elderly males from National Cheng Kung University Hospital: Taiwan, 207 elderly males with diagnosed BPH, 2015-2017. 2015-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring on the same day they were diagnosed.	Linear Regression. Confounders adjusted for: age, body mass index (modeled continuously), and season during which the blood was collected for hormone analysis. Total testosterone and estradiol were additionally adjusted for SHBG. Urinary phthalate metabolites and 8-OHdG were additionally adjusted for urinary creatinine (liner).	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient for MEOHP (95% CI): 1.05 (1.00, 1.12). Multivariate regression coefficients showed significant positive associations between the results for E1 and MEOHP..	Chang et. al 2019 5499417 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
dihydrotestosterone	Health Effect: Reproductive/Developmental-Sex hormone levels (luteinizing hormone, follicle-stimulating hormone, sex hormone binding globulin, inhibinB, dehydroepiandrosterone, dehydroepiandrosterone sulfate, androstenedione, estrone, estradiol, total testosterone, free testosterone, dihydrotestosterone, dihydrotestosterone/total testosterone ratio, estradiol/total testosterone ratio, estradiol/estrone ratio)-Non-cancer. Outcome measure: measured in serum	Patients in clinics. Adults (18+), Older Adults (65+). Taiwan. Male. Cross-Sectional. PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition). Lifestage PESS: Older adults (age >= 65 years). elderly males from National Cheng Kung University Hospital: Taiwan, 207 elderly males with diagnosed BPH, 2015-2017. 2015-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring on the same day they were diagnosed.	Linear Regression. Confounders adjusted for: age, body mass index (modeled continuously), and season during which the blood was collected for hormone analysis. Total testosterone and estradiol were additionally adjusted for SHBG. Urinary phthalate metabolites and 8-OHdG were additionally adjusted for urinary creatinine (liner).	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient for: MEHP (95% CI): 1.12 (1.04, 1.20)MEHHP (95% CI): 1.11 (1.04, 1.18)MEOH (95% CI): 1.13 (1.04, 1.22)MECPP (95% CI): 1.12 (1.04, 1.21). Multivariate regression coefficients showed significant positive associations between the results for DHT and MEHP, MEHHP, MEOHP, and MECPP..	Chang et. al 2019 5499417 Medium
inducible nitric oxide synthetase	Health Effect: Other (please specify below) (Oxidative stress/Inflammation)-Oxidative stress/Inflammation (malondialdehyde, inducible nitric oxide synthetase, 8-hydroxy-2'-deoxyguanosine)-Non-cancer. Outcome measure: measured in serum	Patients in clinics. Adults (18+), Older Adults (65+). Taiwan. Male. Cross-Sectional. PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition). Lifestage PESS: Older adults (age >= 65 years). elderly males from National Cheng Kung University Hospital: Taiwan, 207 elderly males with diagnosed BPH, 2015-2017. 2015-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring on the same day they were diagnosed.	Linear Regression. Confounders adjusted for: age, body mass index (modeled continuously), and season during which the blood was collected for hormone analysis. Total testosterone and estradiol were additionally adjusted for SHBG. Urinary phthalate metabolites and 8-OHdG were additionally adjusted for urinary creatinine (liner).	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient for MEHP (95% CI): 1.32 (1.04, 1.68)MEHHP (95% CI): 1.31 (1.01, 1.72)MEOHP (95% CI): 1.58 (1.10, 2.28)MECPP (95% CI): 1.42 (1.00, .00). Multivariate regression coefficients statistically significant positive associations between the results for iNOS and MEHP, MEHHP, MEOHP, and MECPP..	Chang et. al 2019 5499417 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
8-hydroxy-2'-deoxyguanosine	Health Effect: Other (please specify below) (Oxidative stress/Inflammation)-Oxidative stress/Inflammation (malondialdehyde, inducible nitric oxide synthetase, 8-hydroxy-2'-deoxyguanosine)-Non-cancer. Outcome measure: measured in serum	Patients in clinics. Adults (18+), Older Adults (65+). Taiwan. Male. Cross-Sectional. PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition). Lifestage PESS: Older adults (age >= 65 years). elderly males from National Cheng Kung University Hospital: Taiwan, 207 elderly males with diagnosed BPH, 2015-2017. 2015-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring on the same day they were diagnosed.	Linear Regression. Confounders adjusted for: age, body mass index (modeled continuously), and season during which the blood was collected for hormone analysis. Total testosterone and estradiol were additionally adjusted for SHBG. Urinary phthalate metabolites and 8-OHdG were additionally adjusted for urinary creatinine (liner).	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficients for MEHP (95% CI): 1.09 (0.94, 1.25)MEHHP (95% CI): 1.15 (1.02, 1.31)MEOHP (9% CI): 1.24 (1.06, 1.45)MECPP (95% CI): 1.19 (1.03, 1.38). Multivariate regression coefficients statistically significant positive associations between the results for 8-OHdG and MEHP, MEHHP, MEOHP, and MECPP..	Chang et. al 2019 5499417 Medium
prostate specific antigen	Health Effect: Reproductive/Developmental-benign prostatic hyperplasia (prostate specific antigen, prostate volume)-Non-cancer. Outcome measure: measured in serum	Patients in clinics. Adults (18+), Older Adults (65+). Taiwan. Male. Cross-Sectional. PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition). Lifestage PESS: Older adults (age >= 65 years). elderly males from National Cheng Kung University Hospital: Taiwan, 207 elderly males with diagnosed BPH, 2015-2017. 2015-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring on the same day they were diagnosed.	Linear Regression. Confounders adjusted for: age, body mass index (modeled continuously), and season during which the blood was collected for hormone analysis. Total testosterone and estradiol were additionally adjusted for SHBG. Urinary phthalate metabolites and 8-OHdG were additionally adjusted for urinary creatinine (liner).	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficients for MEHP (95% CI): 1.37 (1.16, 1.61)MEHHP (95% CI): 1.25 (1.09, 1.43)MEOHP (95% CI): 1.42 (1.23, 1.64)MECPP (95% CI): 1.33 (1.12, 1.58). Multivariate regression coefficients statistically significant positive associations between the results for PSA and MEHP, MEHHP, MEOHP, and MECPP..	Chang et. al 2019 5499417 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
prostate volume	Health Effect: Reproductive/Developmental-benign prostatic hyperplasia (prostate specific antigen, prostate volume)-Non-cancer. Outcome measure: measured in serum	Patients in clinics. Adults (18+), Older Adults (65+). Taiwan. Male. Cross-Sectional. PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition). Lifestage PESS: Older adults (age >= 65 years). elderly males from National Cheng Kung University Hospital: Taiwan, 207 elderly males with diagnosed BPH, 2015-2017. 2015-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring on the same day they were diagnosed.	Linear Regression. Confounders adjusted for: age, body mass index (modeled continuously), and season during which the blood was collected for hormone analysis. Total testosterone and estradiol were additionally adjusted for SHBG. Urinary phthalate metabolites and 8-OHdG were additionally adjusted for urinary creatinine (liner).	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficients for MEHP (95% CI): 1.19 (1.09, 1.29)MEHHP (95% CI): 1.17 (1.09, 1.26)MEOHP (95% CI): 1.26 (1.18, 1.36)MECPP (95% CI): 1.23 (1.13, 1.34). Multivariate regression coefficients statistically significant positive associations between the results for prostate volume and MEHP, MEHHP, MEOHP, and MECPP..	Chang et. al 2019 5499417 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Conners' Parent Rating Scale (CPRS) scores: 7 factors oppositional, cognitive problems/inattention, hyperactivity, anxious/shy, perfectionism, social problems, and psychosomatic.	Health Effect: Reproductive/Developmental-Child behavior at 7 years of age (assessed using the Conners' Parent Rating Scale-Revised: Long Form (CPRS) and Child Behavior Checklist (CBCL))-Non-cancer-Neurological/Behavioral-Child behavior at 7 years of age (assessed using the Conners' Parent Rating Scale-Revised: Long Form (CPRS) and Child Behavior Checklist (CBCL))-Non-cancer. Outcome measure: Parent assessment using comprehensive standardized checklist resulting in score	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Adults (18+). United States; New York City (Northern Manhattan and South Bronx). Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters, Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). African American or Dominican women from the Columbia Center for Children's Environmental Health recruited during pregnancy (analysis sample included 322 mother-child pairs). Columbia Center for Children's Environmental Health (CCEH). Recruitment: 1998-2006; Follow-up: NR (child at age 3, child at age 5).	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during third trimester of pregnancy; child exposure measured at 3 years and 5 years.	Poisson Regression. Confounders adjusted for: maternal race/ethnicity, maternal demoralization at child age 7 years, child age at time of CPRS or CBCL assessment, prenatal specific gravity, CAARS inattention/memory.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Mean Ratio (95% CI) per 1 log10 unit increase for following CPRS subscales at age 7 years among girls. MEHP, hyperactivity-impulsiveness = 0.86 (0.76-0.97); MEOHP, hyperactivity-impulsiveness = 0.87 (0.76-1.01) p=0.06; MEHHP, hyperactivity-impulsiveness = 0.90 (0.78-1.03) p=0.12Mean Ratio (95% CI) per 1 log10 unit increase for following internalizing behaviors in CPRS at age 7 years among boys. MEHP, social problems = 1.35 (1.07-1.7)Mean Ratio (95% CI) for 1 log10 unit increase for following externalizing and attention related behaviors at age 7 years among girls. MEOHP, hyperactivity (lower scores) = 0.83 (0.71-0.98); MEHHP, hyperactivity (lower scores) = 0.85 (0.72-0.99); MECPP, hyperactivity (lower scores) = 0.84 (0.73-0.95); MEHP, ADHD index = 0.9 (0.8-1.03)Mean Ratio (95% CI) for 1 log10 unit increase for following internalizing behaviors at age 5 years among girls. MEOHP, social problems = 1.45 (1.14-1.84); MEHHP, social problems = 1.39 (1.1-1.75); MECPP, social problems = 1.39 (1.07-1.79); MEHP, social problems = 1.28 (1.06 - 1.56). MEOHP, emotional liability = 1.31 (1.09 - 1.58); MEHHP, emotional liability = 1.28 (1.07 - 1.53); MECPP, emotional liability = 1.36 (1.11 - 1.66); MEHP, emotional liability = 1.18 (1.01 - 1.39). MEHP, MEOHP, and MEHHP were associated with lower scores of hyperactivity and impulsivity among girls. MEHP was associated with social problems among boys.MEOHP, MEHHP, MECPP, and MEHP were associated with lower scores of hyperactivity among girls. Increased concentrations of MEHP were associated with lower scores on the ADHD index. MEOHP, MEHHP, MECPP, and MEHP were associated with greater social problems and emotional lability among 5-year-old girls..	Daniel et. al 2020 8204339 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Conners' Parent Rating Scale (CPRS) scores: 7 factors oppositional, cognitive problems/inattention, hyperactivity, anxious/shy, perfectionism, social problems, and psychosomatic.	Health Effect: Reproductive/Developmental-Child behavior at 7 years of age (assessed using the Conners' Parent Rating Scale-Revised: Long Form (CPRS) and Child Behavior Checklist (CBCL))-Non-cancer-Neurological/Behavioral-Child behavior at 7 years of age (assessed using the Conners' Parent Rating Scale-Revised: Long Form (CPRS) and Child Behavior Checklist (CBCL))-Non-cancer. Outcome measure: Parent assessment using comprehensive standardized checklist resulting in score	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Adults (18+). United States; New York City (Northern Manhattan and South Bronx). Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters, Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). African American or Dominican women from the Columbia Center for Children's Environmental Health recruited during pregnancy (analysis sample included 322 mother-child pairs). Columbia Center for Children's Environmental Health (CCEH). Recruitment: 1998-2006; Follow-up: NR (child at age 3, child at age 5).	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during third trimester of pregnancy; child exposure measured at 3 years and 5 years.	Poisson Regression. Confounders adjusted for: maternal race/ethnicity, maternal demoralization at child age 7 years, child age at time of CPRS or CBCL assessment, prenatal specific gravity, CAARS inattention/memory.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Mean Ratio (95% CI) per 1 log10 unit increase for following internalizing behaviors in CPRS at age 7 years among boys. MBzP, anxious-shy behavior = 1.20 (1.05-1.36).Mean Ratio (95% CI) per 1 log10 unit increase for following internalizing behaviors in CPRS at age 7 years among girls. MBzP, perfectionism = 1.15 (1.01-1.30).Mean Ratio (95% CI) per 1 log10 unit increase for following externalizing behaviors in CPRS at age 3 years among girls. MBzP, oppositional problems = 1.12 (1-1.24); MBzP, cognitive = 1.15 (1.02-1.28); MBzP, impulsivity = 1.11 (1-1.23); MBzP, ADHD index = 1.16 (1.04-1.3).Mean Ratio (95% CI) per 1 log10 unit increase for following internalizing behaviors in CPRS at age 3 years among girls. MBzP, social problems = 1.24 (1.03-1.48). MBzP was associated with anxious-shy behavior in boys and higher scores of perfectionism among girls.MBzP was associated with increased oppositional, cognitive, impulsivity, ADHD index problems and greater social problem scores..	Daniel et. al 2020 8204339 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Conners' Parent Rating Scale (CPRS) scores: 7 factors oppositional, cognitive problems/inattention, hyperactivity, anxious/shy, perfectionism, social problems, and psychosomatic.	Health Effect: Reproductive/Developmental-Child behavior at 7 years of age (assessed using the Conners' Parent Rating Scale-Revised: Long Form (CPRS) and Child Behavior Checklist (CBCL))-Non-cancer-Neurological/Behavioral-Child behavior at 7 years of age (assessed using the Conners' Parent Rating Scale-Revised: Long Form (CPRS) and Child Behavior Checklist (CBCL))-Non-cancer. Outcome measure: Parent assessment using comprehensive standardized checklist resulting in score	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Adults (18+). United States; New York City (Northern Manhattan and South Bronx). Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters, Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). African American or Dominican women from the Columbia Center for Children's Environmental Health recruited during pregnancy (analysis sample included 322 mother-child pairs). Columbia Center for Children's Environmental Health (CCEH). Recruitment: 1998-2006; Follow-up: NR (child at age 3, child at age 5).	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during third trimester of pregnancy; child exposure measured at 3 years and 5 years.	Poisson Regression. Confounders adjusted for: maternal race/ethnicity, maternal demoralization at child age 7 years, child age at time of CPRS or CBCL assessment, prenatal specific gravity, CAARS inattention/memory.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Mean Ratio (95% CI) per 1 log10 unit increase for following internalizing behaviors in CPRS at age 7 years among boys. MiBP, anxious-shy behavior = 1.22 (1.02-1.47); MiBP, psychosomatic problems = 1.28 (1.02 -1.60)Mean Ratio (95% CI) per 1 log10 unit increase for following externalizing behaviors in CPRS at age 5 years among boys. MiBP, impulsiveness = 0.85 (0.73-0.99); MiBP, global index = 0.87 (0.75-1)Mean Ratio (95% CI) per 1 log10 unit increase for following internalizing behaviors in CPRS at age 5 years among girls. MiBP, social problems = 1.31 (1.03-1.66); MiBP, emotional lability = 1.27 (1.06 - 1.52). MiBP was associated with anxious-shy behavior and psychosomatic problems in boys.MiBP was associated with impulsiveness and lower Conners' Global Index score in 5-year-old boys.MiBP was associated with greater social problems and emotional lability among 5-year-old girls.Prenatal exposure to MiBP was associated with greater anxiety and depression, somatic problems, thought problems, total internalizing behavior score, and total CBCL score among boys..	Daniel et. al 2020 8204339 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Conners' Parent Rating Scale (CPRS) scores: 7 factors oppositional, cognitive problems/inattention, hyperactivity, anxious/shy, perfectionism, social problems, and psychosomatic.	Health Effect: Reproductive/Developmental-Child behavior at 7 years of age (assessed using the Conners' Parent Rating Scale-Revised: Long Form (CPRS) and Child Behavior Checklist (CBCL))-Non-cancer-Neurological/Behavioral-Child behavior at 7 years of age (assessed using the Conners' Parent Rating Scale-Revised: Long Form (CPRS) and Child Behavior Checklist (CBCL))-Non-cancer. Outcome measure: Parent assessment using comprehensive standardized checklist resulting in score	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Adults (18+). United States; New York City (Northern Manhattan and South Bronx). Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters, Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). African American or Dominican women from the Columbia Center for Children's Environmental Health recruited during pregnancy (analysis sample included 322 mother-child pairs). Columbia Center for Children's Environmental Health (CCEH). Recruitment: 1998-2006; Follow-up: NR (child at age 3, child at age 5).	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during third trimester of pregnancy; child exposure measured at 3 years and 5 years.	Poisson Regression. Confounders adjusted for: maternal race/ethnicity, maternal demoralization at child age 7 years, child age at time of CPRS or CBCL assessment, prenatal specific gravity, CAARS inattention/memory.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Mean Ratio (95% CI) per 1 log10 unit increase for following internalizing behaviors in CPRS at age 7 years among girls. MnBP, psychosomatic problems = 1.28 (1.02-1.59).Mean Ratio (95% CI) per 1 log10 unit increase for following internalizing behaviors in CPRS at age 7 years among boys. MnBP, social problems = 1.34 (0.99-1.82).. MnBP was associated with social problems in boys..	Daniel et. al 2020 8204339 Medium

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Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Conners' Parent Rating Scale (CPRS) scores: 7 factors oppositional, cognitive problems/inattention, hyperactivity, anxious/shy, perfectionism, social problems, and psychosomatic.	Health Effect: Reproductive/Developmental-Child behavior at 7 years of age (assessed using the Conners' Parent Rating Scale-Revised: Long Form (CPRS) and Child Behavior Checklist (CBCL))-Non-cancer-Neurological/Behavioral-Child behavior at 7 years of age (assessed using the Conners' Parent Rating Scale-Revised: Long Form (CPRS) and Child Behavior Checklist (CBCL))-Non-cancer. Outcome measure: Parent assessment using comprehensive standardized checklist resulting in score	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Adults (18+). United States; New York City (Northern Manhattan and South Bronx). Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters, Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). African American or Dominican women from the Columbia Center for Children's Environmental Health recruited during pregnancy (analysis sample included 322 mother-child pairs). Columbia Center for Children's Environmental Health (CCEH). Recruitment: 1998-2006; Follow-up: NR (child at age 3, child at age 5).	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during third trimester of pregnancy; child exposure measured at 3 years and 5 years.	Weighted quantile sum regression. Confounders adjusted for: maternal race/ethnicity, maternal demoralization at child age 7 years, child age at time of CPRS or CBCL assessment, prenatal specific gravity, CAARS inattention/memory.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Odds ratio (95% CI) per 1 log10 unit increase for following behavioral outcomes for CPRS scores in boys. Sum DEHP, social problems = 2.15 (1.13-4.06) p=0.02Odds ratio (95% CI) per 1 log10 unit increase for following behavioral outcomes for CPRS scores in girls. Sum DEHP, anxious shy problems = 2.19 (1.15-4.16) p=0.02 Odds ratio (95% CI) per 1 log10 unit increase for following behavioral outcomes for CPRS scores in all children. Sum DEHP, emotional lability problems = 0.61 (0.38-0.97) p=0.04Odds ratio per 1 log10 unit increase for following externalizing behaviors in CPRS in females age 3-years-old. Sum DEHP, cognitive problems = 2.58 p=0.01Odds ratio per 1 log10 unit increase for following internalizing behaviors in CPRS in all children age 5-years-old. Sum DEHP, emotional lability = 1.7 p=0.01. The sum of DEHP metabolites are significantly associated with social problems in boys, anxious shy problems in girls, and reduced odds of emotional lability problems in all children.The WQS of DEHP phthalates were associated with cognitive problems among females at age 3. The WQS of DEHP phthalates were significantly associated with increased odds of higher scores on the emotional lability score in all children age 5-years-old..	Daniel et. al 2020 8204339 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL)	Health Effect: Reproductive/Developmental-Child behavior at 7 years of age (assessed using the Conners' Parent Rating Scale-Revised: Long Form (CPRS) and Child Behavior Checklist (CBCL))-Non-cancer-Neurological/Behavioral-Child behavior at 7 years of age (assessed using the Conners' Parent Rating Scale-Revised: Long Form (CPRS) and Child Behavior Checklist (CBCL))-Non-cancer. Outcome measure: Score obtained using 118 Likert-point items with 9 subscales: anxious/depressed, withdrawn/depressed, somatic problems, thought problems, attention problems, rule-breaking behavior, aggressive behavior and other problems	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Adults (18+). United States; New York City (Northern Manhattan and South Bronx). Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters, Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). African American or Dominican women from the Columbia Center for Children's Environmental Health recruited during pregnancy (analysis sample included 322 mother-child pairs). Columbia Center for Children's Environmental Health (CCEH). Recruitment: 1998-2006; Follow-up: NR (child at age 3, child at age 5).	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during third trimester of pregnancy; child exposure measured at 3 years and 5 years.	Poisson Regression. Confounders adjusted for: maternal race/ethnicity, maternal demoralization at child age 7 years, child age at time of CPRS or CBCL assessment, prenatal specific gravity, CAARS inattention/memory.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Mean Ratio (95% CI) per 1 log10 unit increase for following internalizing behaviors in CBCL among boys. MiBP, anxiety and depression = 1.26 (1.03-1.53); MiBP, somatic problems = 1.29 (1.01 - 1.66); MiBP, thought problems = 1.35 (1.07 - 1.71); MiBP, total internalizing behavior score = 1.24 (1.04 - 1.49) Mean Ratio (95% CI) per 1 log10 unit increase for following externalizing behaviors in CBCL among boys. MiBP, total CBCL score = 1.17 (1.01-1.34). Prenatal exposure to MiBP was associated with greater anxiety and depression, somatic problems, thought problems, total internalizing behavior score, and total CBCL score among boys..	Daniel et. al 2020 8204339 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL)	Health Effect: Reproductive/Developmental-Child behavior at 7 years of age (assessed using the Conners' Parent Rating Scale-Revised: Long Form (CPRS) and Child Behavior Checklist (CBCL))-Non-cancer-Neurological/Behavioral-Child behavior at 7 years of age (assessed using the Conners' Parent Rating Scale-Revised: Long Form (CPRS) and Child Behavior Checklist (CBCL))-Non-cancer. Outcome measure: Score obtained using 118 Likert-point items with 9 subscales: anxious/depressed, withdrawn/depressed, somatic problems, thought problems, attention problems, rule-breaking behavior, aggressive behavior and other problems	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Adults (18+). United States; New York City (Northern Manhattan and South Bronx). Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters, Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). African American or Dominican women from the Columbia Center for Children's Environmental Health recruited during pregnancy (analysis sample included 322 mother-child pairs). Columbia Center for Children's Environmental Health (CCEH). Recruitment: 1998-2006; Follow-up: NR (child at age 3, child at age 5).	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during third trimester of pregnancy; child exposure measured at 3 years and 5 years.	Poisson Regression. Confounders adjusted for: maternal race/ethnicity, maternal demoralization at child age 7 years, child age at time of CPRS or CBCL assessment, prenatal specific gravity, CAARS inattention/memory.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Authors note that prenatal exposure to MBzP was associated with somatic and withdrawn personalities among girls (MEAN RATIOS FOR MBzP ARE NOT SIGNIFICANT IN APPENDICES). Authors note that prenatal exposure to MBzP was associated with somatic and withdrawn personalities among girls (MEAN RATIOS FOR MBzP ARE NOT SIGNIFICANT IN APPENDICES).	Daniel et. al 2020 8204339 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Weight, BMI	Health Effect: Nutritional/Metabolic-Body weight, BMI-Non-cancer. Outcome measure: Assessment by clinical pediatrician	General public. Preschool (3-5), Middle childhood (6-11). Turkey; Antalya. Female. Case-Control. PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Children (age 1 year through < 11 years). Cases – Turkey, Antalya City, 29 girls (4-8 years old) with premature thelarche. Controls – Turkey, Antalya City, 25 healthy girls (4-8 years old). 2010-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Not specified but likely concurrent with or after development of outcome due to case-control design.	nan.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Spearman correlation coefficient (p-value)MnBP and weight: 0.550 (p<0.01)MnBP and BMI: 0.611 (p<0.01). Significant positive correlations between MnBP and both weight and BMI..	Durmaz et. al 2018 5512126 Low
Weight, BMI	Health Effect: Nutritional/Metabolic-Body weight, BMI-Non-cancer. Outcome measure: Assessment by clinical pediatrician	General public. Preschool (3-5), Middle childhood (6-11). Turkey; Antalya. Female. Case-Control. PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Children (age 1 year through < 11 years). Cases – Turkey, Antalya City, 29 girls (4-8 years old) with premature thelarche. Controls – Turkey, Antalya City, 25 healthy girls (4-8 years old). 2010-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Not specified but likely concurrent with or after development of outcome due to case-control design.	nan.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Spearman correlation coefficient (p-value)MBzP and BMI: 0.375 (p=0.041). Significant positive correlation between MBzP and BMI. Correlation between MBzP and weight positive but not significant..	Durmaz et. al 2018 5512126 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Sex hormones (luteinizing hormone (LH), follicle stimulating hormone (FSH), estradiol)	Health Effect: Reproductive/Developmental-Sex hormones: serum luteinizing hormone (LH), plasma follicle stimulating hormone (FSH), serum estradiol.-Non-cancer. Outcome measure: Enzyme linked immunosorbent assay (LH, FSH), electrochemiluminescence immunoassay (estradiol)	General public. Preschool (3-5), Middle childhood (6-11). Turkey; Antalya. Female. Case-Control. PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Children (age 1 year through < 11 years). Cases – Turkey, Antalya City, 29 girls (4-8 years old) with premature thelarche. Controls – Turkey, Antalya City, 25 healthy girls (4-8 years old). 2010-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Not specified but likely concurrent with or after development of outcome due to case-control design.	nan.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Spearman correlation coefficient (p-value)MiBP and FSH: 0.323 (p=0.045). Significant positive correlation between MiBP and FSH. Correlations with LH and estradiol not significant..	Durmaz et. al 2018 5512126 Low
Thyroid stimulating hormone (TSH), free T4 (fT4)	Health Effect: Thyroid-Serum thyroid stimulating hormone (TSH) and serum free T4 (fT4)-Non-cancer. Outcome measure: Chemiluminescence microparticle immunoassay	General public. Preschool (3-5), Middle childhood (6-11). Turkey; Antalya. Female. Case-Control. PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Children (age 1 year through < 11 years). Cases – Turkey, Antalya City, 29 girls (4-8 years old) with premature thelarche. Controls – Turkey, Antalya City, 25 healthy girls (4-8 years old). 2010-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Not specified but likely concurrent with or after development of outcome due to case-control design.	nan.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Spearman correlation coefficient (p-value)MiBP and fT4: -0.385 (p=0.002). Significant inverse correlation between MiBP and fT4. Correlation between MiBP and TSH inverse but not significant..	Durmaz et. al 2018 5512126 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Weight, BMI	Health Effect: Nutritional/Metabolic-Body weight, BMI-Non-cancer. Outcome measure: Assessment by clinical pediatrician	General public. Preschool (3-5), Middle childhood (6-11). Turkey; Antalya. Female. Case-Control. PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Children (age 1 year through < 11 years). Cases – Turkey, Antalya City, 29 girls (4-8 years old) with premature thelarche. Controls – Turkey, Antalya City, 25 healthy girls (4-8 years old). 2010-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Not specified but likely concurrent with or after development of outcome due to case-control design.	nan.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Spearman correlation coefficient (p-value)MiBP and weight: 0.742 (p< 0.01)MiBP and BMI: 0.574 (0.002). Significant positive correlations between MiBP and both weight and BMI..	Durmaz et. al 2018 5512126 Low
Sex hormones (luteinizing hormone (LH), follicle stimulating hormone (FSH), estradiol)	Health Effect: Reproductive/Developmental-Sex hormones: serum luteinizing hormone (LH), plasma follicle stimulating hormone (FSH), serum estradiol.-Non-cancer. Outcome measure: Enzyme linked immunosorbent assay (LH, FSH), electrochemiluminescence immunoassay (estradiol)	General public. Preschool (3-5), Middle childhood (6-11). Turkey; Antalya. Female. Case-Control. PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Children (age 1 year through < 11 years). Cases – Turkey, Antalya City, 29 girls (4-8 years old) with premature thelarche. Controls – Turkey, Antalya City, 25 healthy girls (4-8 years old). 2010-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Not specified but likely concurrent with or after development of outcome due to case-control design.	nan.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Spearman correlation coefficient (p-value)MEHP and FSH: 0.315 (p=0.049)MEHP and LH: 0.475 (p=0.041). Significant positive correlation between MEHP and both FSH and LH. Correlation between MEHP and estradiol not significant. Correlations between FSH, LH, estradiol and other DEHP metabolites not significant..	Durmaz et. al 2018 5512126 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Ovary volume, uterus volume, pubic hair growth	Health Effect: Reproductive/Developmental-Ovary and uterus volumes; pubic hair growth-Non-cancer. Outcome measure: Not specified	General public. Preschool (3-5), Middle childhood (6-11). Turkey; Antalya. Female. Case-Control. PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Children (age 1 year through < 11 years). Cases – Turkey, Antalya City, 29 girls (4-8 years old) with premature thelarche. Controls – Turkey, Antalya City, 25 healthy girls (4-8 years old). 2010-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Not specified but likely concurrent with or after development of outcome due to case-control design.	nan.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Spearman correlation coefficient (p-value)MEHP and uterus volume: -0.339 (p=0.041)MEHHP and pubic hair growth: -0.373 (p=0.041)MEOHP and pubic hair growth: -0.378 (p=0.002)MECPP and pubic hair growth: -0.407 (p=0.037). Significant inverse correlations between MEHP and uterus volume, and between MEHHP, MEOHP, MECPP and pubic hair growth. No other significant correlations between DEHP metabolites and outcomes of ovary volume, uterus volume, or pubic hair growth..	Durmaz et. al 2018 5512126 Low
Thyroid stimulating hormone (TSH), free T4 (fT4)	Health Effect: Thyroid-Serum thyroid stimulating hormone (TSH) and serum free T4 (fT4)-Non-cancer. Outcome measure: Chemiluminescence microparticle immunoassay	General public. Preschool (3-5), Middle childhood (6-11). Turkey; Antalya. Female. Case-Control. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Cases – Turkey, Antalya City, 29 girls (4-8 years old) with premature thelarche. Controls – Turkey, Antalya City, 25 healthy girls (4-8 years old). 2010-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Not specified but likely concurrent with or after development of outcome due to case-control design.	nan.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Spearman correlation coefficient (p-value)Sum DEHP metabolites and fT4: -0.356 (p=0.039). Significant inverse correlation between sum of DEHP metabolites and ft4. Correlation between sum of DEHP metabolites and TSH inverse but not significant. No significant correlations between individual DEHP metabolites and thyroid hormones..	Durmaz et. al 2018 5512126 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Weight, BMI	Health Effect: Nutritional/Metabolic-Body weight, BMI-Non-cancer. Outcome measure: Assessment by clinical pediatrician	General public. Preschool (3-5), Middle childhood (6-11). Turkey; Antalya. Female. Case-Control. PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Children (age 1 year through < 11 years). Cases – Turkey, Antalya City, 29 girls (4-8 years old) with premature thelarche. Controls – Turkey, Antalya City, 25 healthy girls (4-8 years old). 2010-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Not specified but likely concurrent with or after development of outcome due to case-control design.	nan.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Spearman correlation coefficient (p-value)MEHHP and weight: 0.450 (p=0.014)MEOHP and weight: 0.468 (p=0.013)MECPP and weight: 0.389 (p=0.031)Sum DEHP metabolites and weight: 0.707 (p<0.01)MEHHP and BMI: 0.532 (p<0.01)MEOHP and BMI: 0.551 (p<0.01)MECPP and BMI: 0.466 (p=0.001)Sum DEHP metabolites and BMI: 0.615 (p<0.01). Significant positive correlations between MEHHP, MEOHP, MECPP, and sum of DEHP metabolites and both weight and BMI. Correlations between MEHP and weight and BMI not significant..	Durmaz et. al 2018 5512126 Low
Premature thelarche	Health Effect: Reproductive/Developmental-Premature thelarche (isolated breast development in girls aged 4-8 years)-Non-cancer. Outcome measure: Physician diagnosis	General public. Preschool (3-5), Middle childhood (6-11). Turkey; Antalya. Female. Case-Control. PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Children (age 1 year through < 11 years). Cases – Turkey, Antalya City, 29 girls (4-8 years old) with premature thelarche. Controls – Turkey, Antalya City, 25 healthy girls (4-8 years old). 2010-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Not specified but likely concurrent with or after development of outcome due to case-control design.	nan.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Median (min, max) MEHP among controls: 10.38 (1.68, 30.04) ug/g creatinineMedian (min, max) MEHP among cases: 19.51 (1.68, 176.66) ug/g creatinineMean (+- SEM) among controls: 11.54 +- 1.39 ug/g creatinineMean (+- SEM) among cases: 33.96 +- 6.88 ug/g creatininep-value = 0.002. MEHP concentrations were higher among cases with premature thelarche than among healthy controls. No significant differences between cases and controls for other DEHP metabolites..	Durmaz et. al 2018 5512126 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Run duration (average time spent looking at stimuli before looking away), novelty preference (proportion of time spent looking at the novel stimulus), time to familiarization	Health Effect: Neurological/Behavioral-Cognition at 7-8 months as assessed by information processing speed (average run duration during familiarization trial), visual attention (time to reach familiarization criterion during familiarization trial), and visual recognition memory (novelty preference in test trial) using eye tracking within a paired comparison visual recognition memory (VRM) test.-Non-cancer. Outcome measure: Visual recognition memory test	General public, Pregnant people. Infant (0-1), Adults (18+). United States; Champaign-Urbana, Illinois. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Infants (birth through < 12 months). Mothers and children from the IKIDS cohort (Champaign-Urbana, IL area), children aged 7-8 months. Illinois Kids Development Study (IKIDS). Recruitment: December 2013-August 2018; Follow-up: Up to 8 months after birth.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy, outcomes measured in children 7-8 months after birth.	Linear Regression. Confounders adjusted for: maternal race and ethnicity, education, parity, household income, age, and verbal IQ, infant sex, gestational age at birth, postnatal age at assessment, stimulus set.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Run duration Set 2 β estimate (95% Confidence Interval): 0.08 (0, 0.16) $p < 0.05$, Set 1 β estimate (95% Confidence Interval): -0.14 (-0.34, 0.06); Set 1-2 interaction p-value: $p<0.05$.. Higher ΣDEHP metabolite concentrations were associated with significantly longer run durations (suggesting slower information processing with higher prenatal phthalate exposure), but only among specific set strata (set 2)..	Dzwilewski et. al 2021 7978460 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Anxious/Depressed in the borderline or clinical range	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four ”adaptive” scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) problems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Logistic Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted OR per 1-unit increase in unadjusted MEHP concentrationsOR (95% CI): 3.28 (1.09, 9.88). Significant positive association in anxious/depressed per 1-unit increase in MEHP. Significant at the q < 0.10 level.	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Internalizing problems in the borderline or clinical range	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four ”adaptive” scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) problems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through $<$ 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Logistic Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted OR per 1-unit increase in unadjusted MEOHP concentrationsOR (95% CI): 1.50 (1.01, 2.23). Significant positive association in internalizing problems per 1-unit increase in MEOHP. Significant at the q $<$ 0.05 level.	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Anxiety in the borderline or clinical range	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight "clinical" scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four "adaptive" scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) problems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight "clinical" scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through $<$ 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Logistic Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted OR per 1-unit increase in unadjusted MEOHP concentrationsOR (95% CI): 1.50 (1.08, 2.08). Significant positive association in anxiety per 1-unit increase in MEOHP. Significant at the q $<$ 0.10 level.	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Anxiety in the borderline or clinical range	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight "clinical" scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four "adaptive" scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) problems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight "clinical" scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through $<$ 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Logistic Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted OR per 1-unit increase in unadjusted MECPP concentrationsOR (95% CI): 1.39 (1.00, 1.93). Significant positive association in anxiety per 1-unit increase in MECPP. Significant at the q $<$ 0.10 level.	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Anx-ious/depressed in the bor-derline or clinical range	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four ”adaptive” scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) prob-lems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or em-bryo/fetus (developmental) (conception through birth), Children (age 1 year through $<$ 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Un-clear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Logistic Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted OR per 1-unit increase in unadjusted MECPP concentrationsOR (95% CI): 3.21 (1.11, 9.25). Significant positive association in anxiety per 1-unit increase in MECPP. Significant at the q $<$ 0.10 level.	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Externaliz-ing problems in the bor-derline or clinical range	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four ”adaptive” scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) prob-lems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or em-bryo/fetus (developmental) (conception through birth), Children (age 1 year through $<$ 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Un-clear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Logistic Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted OR per 1-unit increase in unadjusted MBzP concentrationsOR (95% CI): 2.07 (1.27, 3.38). Significant positive association in anxiety per 1-unit increase in MBzP. Significant at the q $<$ 0.05 level.	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
BSI in the borderline or clinical range	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four ”adaptive” scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) problems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through $<$ 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Logistic Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted OR per 1-unit increase in unadjusted MBzP concentrationsOR (95% CI): 2.02 (1.31, 3.13). Significant positive association in anxiety per 1-unit increase in MBzP. Significant at the q $<$ 0.05 level.	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Hyperac-tivity in the borderline or clinical range	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight "clinical" scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four "adaptive" scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) prob-lems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight "clinical" scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or em-bryo/fetus (developmental) (conception through birth), Children (age 1 year through $<$ 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Un-clear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Logistic Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted OR per 1-unit increase in unadjusted MBzP concentrationsOR (95% CI): 1.60 (1.09, 2.35). Significant positive association in anxiety per 1-unit increase in MBzP. Significant at the q $<$ 0.10 level.	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Aggression in the borderline or clinical range	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight "clinical" scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four "adaptive" scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) problems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight "clinical" scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through $<$ 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Logistic Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted OR per 1-unit increase in unadjusted MBzP concentrationsOR (95% CI): 1.61 (1.05, 2.47). Significant positive association in anxiety per 1-unit increase in MBzP. Significant at the q $<$ 0.05 level.	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Anxiety in the borderline or clinical range	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight "clinical" scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four "adaptive" scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) problems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight "clinical" scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through $<$ 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Logistic Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted OR per 1-unit increase in unadjusted MBzP concentrationsOR (95% CI): 1.66 (1.22, 2.24). Significant positive association in anxiety per 1-unit increase in MBzP. Significant at the q $<$ 0.10 level.	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Withdrawal in the borderline or clinical range	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four ”adaptive” scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) problems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through $<$ 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Logistic Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted OR per 1-unit increase in unadjusted MBzP concentrationsOR (95% CI): 1.67 (1.13, 2.45). Significant positive association in anxiety per 1-unit increase in MBzP. Significant at the q $<$ 0.10 level.	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Externaliz-ing problems in the bor-derline or clinical range	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four ”adaptive” scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) prob-lems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or em-bryo/fetus (developmental) (conception through birth), Children (age 1 year through $<$ 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Un-clear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Logistic Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted OR per 1-unit increase in unadjusted MBzP concentrationsOR (95% CI): 1.80 (1.19, 2.72). Significant positive association in anxiety per 1-unit increase in MBzP. Significant at the q $<$ 0.05 level.	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Anxiety in the borderline or clinical range	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight "clinical" scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four "adaptive" scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) problems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight "clinical" scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Logistic Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted OR per 1-unit increase in unadjusted MBP concentrationsOR (95% CI): 1.37 (1.00, 1.88). Significant positive association in anxiety per 1-unit increase in MBP. Significant at the $q < 0.05$ level.	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Internalizing problems in the borderline or clinical range	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight "clinical" scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four "adaptive" scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) problems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight "clinical" scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through $<$ 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Logistic Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted OR per 1-unit increase in unadjusted MiBP concentrationsOR (95% CI): 1.93 (1.25, 3.00. Significant positive association in anxiety per 1-unit increase in MiBP. Significant at the q $<$ 0.05 level.	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Aggression in the borderline or clinical range	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight "clinical" scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four "adaptive" scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) problems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight "clinical" scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through $<$ 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Logistic Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted OR per 1-unit increase in unadjusted MiBP concentrationsOR (95% CI): 1.78 (1.10, 2.88). Significant positive association in anxiety per 1-unit increase in MiBP. Significant at the q $<$ 0.10 level..	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Anxiety in the borderline or clinical range	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight "clinical" scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four "adaptive" scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) problems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight "clinical" scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through $<$ 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Logistic Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted OR per 1-unit increase in unadjusted MiBP concentrationsOR (95% CI): 1.47 (1.03, 2.11). Significant positive association in anxiety per 1-unit increase in MiBP. Significant at the q $<$ 0.05 level..	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Depression in the borderline or clinical range	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight "clinical" scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four "adaptive" scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) problems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight "clinical" scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through $<$ 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Logistic Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted OR per 1-unit increase in unadjusted MiBP concentrationsOR (95% CI): 1.78 (1.14, 2.79). Significant positive association in anxiety per 1-unit increase in MiBP. Significant at the q $<$ 0.10 level..	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Externalizing problems scores in the 3-4 year old children	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four ”adaptive” scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) problems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Linear Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Regression coefficients (95% CI) for:Overall cohort: 0.16 (0.04, 0.28) **Females: 0.08 (-0.09, 0.25)Males: 0.26 (0.08, 0.44) ***. Significant associations noted for the overall cohort and males for externalizing problems associated with prenatal MBzP phthalate quartiles.** q < 0.10*** q < 0.05.	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Internalizing problem scores in the 3-4 year old children	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four ”adaptive” scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) problems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Linear Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Regression coefficients (95% CI) for:Overall cohort: 0.16 (0.04, 0.29)**Females: 0.09 (-0.09, 0.28)Males: 0.24 (0.06, 0.42) ***. Significant associations noted for the overall cohort and males for internalizing problems associated with prenatal phthalate MBzP quartiles.** q < 0.10*** q < 0.05.	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Behavioral symptoms index scores in the 3-4 year old children	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four ”adaptive” scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) problems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through $<$ 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Linear Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Regression coefficients (95% CI) for:Overall cohort: 0.18 (0.05, 0.30) ***Females: 0.10 (-0.08, 0.28)Males: 0.26 (0.09, 0.43) ***. Significant associations noted for the overall cohort and males for behavioral symptoms index scores associated with prenatal MBzP phthalate quartiles.** $q < 0.10$*** $q < 0.05$.	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Behavioral symptoms index scores for 3-4 year old children	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four ”adaptive” scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) problems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through $<$ 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Linear Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Regression coefficients (95% CI) for:Overall: 0.12 (-0.02, 0.25)Females: 0.04 (-0.16, 0.24)Males: 0.19 (0.01, 0.37) **. Significant association between prenatal phthalate concentrations and behavioral symptoms index in males for MBP. ** q $<$ 0.10.	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Externalizing problem scores for 3-4 year old children	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four ”adaptive” scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) problems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Linear Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Regression coefficients (95% CI) for:Overall: 0.16 (0.01, 0.31) *Females: 0.22 (-0.01, 0.45)Males: 0.12 (-0.09, 0.32). Significant association between MiBP and externalizing problems score for the overall cohort. No significant associations for males or females. * $p < 0.05$.	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Internalizing problem scores for 3-4 year old children	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four ”adaptive” scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) problems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Linear Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Regression coefficients (95% CI) for:Overall: 0.20 (0.05, 0.36) *Females: 0.20 (-0.05, 0.44)Males: 0.21 (0.01, 0.41) **. Significant association between MiBP and internalizing problems score for the overall cohort and males. No significant associations for females. * $p < 0.05$** $q < 0.10$.	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Behavioral symptoms index scores for 3-4 year old children	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four ”adaptive” scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) problems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Linear Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Regression coefficients (95% CI) for:Overall: 0.21 (0.06, 0.36) ***Females: 0.20 (-0.05, 0.44)Males: 0.22 (0.03, 0.42) **. Significant association between MiBP and behavioral symptoms index scores for the overall cohort and males. No significant associations for females. ** q < 0.10*** q < 0.05.	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Externalizing problem scores in the 3-4 year old children	Health Effect: Neurological/Behavioral-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite scales (Internalizing problems, externalizing problems, and behavioral symptoms index), (BASC-2 four ”adaptive” scales and adaptive skills composites scale not included). Also includes parent version of the Child Behavior Checklist (CBCL) T scores–two broad syndrome groupings (Internalizing problems, externalizing problems), Total problems, Attention-Deficit Hyperactivity (ADH) problems, aggressive behavior, anxious/depressed, anxiety problems, affective problems, somatic complaints, pervasive developmental (PD) problems, withdrawn, attention problems.-Non-cancer-Reproductive/Developmental-Mother-completed preschool version of the Behavior Assessment System for Children-Second Edition Parent Rating Scales-Preschool (BASC-2) T scores- eight ”clinical” scales (Hyperactivity, aggression, anxiety, depression, somatization, atypicality, withdrawal, and attention problems), and three of four composite	Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through $<$ 11 years). Mother-child pairs from the Alberta Pregnancy Outcomes and Nutrition (APrON) study (enrolled n=351, used in analysis n=351). Alberta Pregnancy Outcomes and Nutrition (APrON). 2009-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during the second trimester of pregnancy.	Linear Regression. Confounders adjusted for: urinary creatinine, family income, child sex, Full-Scale Intelligence Quotient (FSIQ).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Regression coefficients (95% CI) for:Overall cohort: 0.10 (-0.03, 0.22)Females: 0.01 (-0.16, 0.19)Males: 0.19 (0.01, 0.37)*. Significant associations between MBzP and externalizing problems on the CBCL in males. No significant associations for the overall cohort or females. * $p < 0.05$.	England-Mason et. al 2020 6717805 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Masculine scores	Health Effect: Neurological/Behavioral-Preschool Activities Inventory (PSAI) scores for masculine, feminine, and composite-Non-cancer. Outcome measure: Preschool Activities Inventory Modified (PSAI-M)	Pregnant people. Preschool (3-5), Adults (18+). United States; California, New York, Washington, Minnesota. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-child pairs from the TIDES cohort study (enrolled n=969, used in study n=498, used in analysis n=243 boys). The Infant Development and the Environment Study (TIDES). 2010-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during first and third trimesters.	Linear Regression. Confounders adjusted for: child age, maternal education, race, same sex older sibling, parental attitudes.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted regression coefficient (95% CI)MnBP: -2.2 (-4.2, -0.2). Significant negative association between phthalate concentrations and masculine scores in boys.	Evans et. al 2021 9354255 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Masculine scores	Health Effect: Neurological/Behavioral-Preschool Activities Inventory (PSAI) scores for masculine, feminine, and composite-Non-cancer. Outcome measure: Preschool Activities Inventory Modified (PSAI-M)	Pregnant people. Preschool (3-5), Adults (18+). United States; California, New York, Washington, Minnesota. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-child pairs from the TIDES cohort study (enrolled n=969, used in study n=498, used in analysis n=243 boys). The Infant Development and the Environment Study (TIDES). 2010-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during first and third trimesters.	Linear Regression. Confounders adjusted for: child age, maternal education, race, same sex older sibling, parental attitudes.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted regression coefficient (95% CI)MBzP: -2.4 (-4.1, -0.7). Significant negative association between MBzP phthalate concentrations and masculine scores in boys.	Evans et. al 2021 9354255 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Masculine scores	Health Effect: Neurological/Behavioral-Preschool Activities Inventory (PSAI) scores for masculine, feminine, and composite-Non-cancer. Outcome measure: Preschool Activities Inventory Modified (PSAI-M)	Pregnant people. Preschool (3-5), Adults (18+). United States; California, New York, Washington, Minnesota. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-child pairs from the TIDES cohort study (enrolled n=969, used in study n=498, used in analysis n=255 girls). The Infant Development and the Environment Study (TIDES). 2010-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during first and third trimesters.	Linear Regression. Confounders adjusted for: child age, maternal education, race, same sex older sibling, parental attitudes.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted regression coefficient (95% CI)MBzP: -2.1 (-4.0, -0.3). Significant negative association between phthalate concentrations and masculine scores in girls.	Evans et. al 2021 9354255 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Masculine scores	Health Effect: Neurological/Behavioral-Preschool Activities Inventory (PSAI) scores for masculine, feminine, and composite-Non-cancer. Outcome measure: Preschool Activities Inventory Modified (PSAI-M)	Pregnant people. Preschool (3-5), Adults (18+). United States; California, New York, Washington, Minnesota. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-child pairs from the TIDES cohort study (enrolled n=969, used in study n=498, used in analysis n=243 boys). The Infant Development and the Environment Study (TIDES). 2010-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during first trimester.	Linear Regression. Confounders adjusted for: child age, maternal education, race, same sex older sibling, parental attitudes.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted regression coefficient (95% CI)MBzP:-2.5 (-4.6, -0.4). Significant negative association between MnBP phthalate concentrations and masculine scores in boys.	Evans et. al 2021 9354255 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Masculine scores	Health Effect: Neurological/Behavioral-Preschool Activities Inventory (PSAI) scores for masculine, feminine, and composite-Non-cancer. Outcome measure: Preschool Activities Inventory Modified (PSAI-M)	Pregnant people. Preschool (3-5), Adults (18+). United States; California, New York, Washington, Minnesota. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-child pairs from the TIDES cohort study (enrolled n=969, used in study n=498, used in analysis n=243 boys). The Infant Development and the Environment Study (TIDES). 2010-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during first trimester.	Linear Regression. Confounders adjusted for: child age, maternal education, race, same sex older sibling, parental attitudes.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted regression coefficient (95% CI)MiBP: -2.4 (-4.7, -0.1). Significant negative association between MiBP phthalate concentrations and masculine scores in boys.	Evans et. al 2021 9354255 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Masculine scores	Health Effect: Neurological/Behavioral-Preschool Activities Inventory (PSAI) scores for masculine, feminine, and composite-Non-cancer. Outcome measure: Preschool Activities Inventory Modified (PSAI-M)	Pregnant people. Preschool (3-5), Adults (18+). United States; California, New York, Washington, Minnesota. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-child pairs from the TIDES cohort study (enrolled n=969, used in study n=498, used in analysis n=243 boys). The Infant Development and the Environment Study (TIDES). 2010-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during first trimester.	Linear Regression. Confounders adjusted for: child age, maternal education, race, same sex older sibling, parental attitudes.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted regression coefficient (95% CI)MBzP: -2.7 (-4.5, -0.9). Significant negative association between MBzP phthalate concentrations and masculine scores in boys.	Evans et. al 2021 9354255 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Masculine scores	Health Effect: Neurological/Behavioral- Preschool Activities Inventory (PSAI) scores for masculine, feminine, and composite-Non-cancer. Outcome measure: Preschool Activities Inventory Modified (PSAI-M)	Pregnant people. Preschool (3-5), Adults (18+). United States; California, New York, Washington, Minnesota. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-child pairs from the TIDES cohort study (enrolled n=969, used in study n=498, used in analysis n=255 girls). The Infant Development and the Environment Study (TIDES). 2010-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during first trimester.	Linear Regression. Confounders adjusted for: child age, maternal education, race, same sex older sibling, parental attitudes.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted regression coefficient (95% CI)MBzP: -2.3 (-4.3, -0.4). Significant negative association between phthalate concentrations and masculine scores in girls.	Evans et. al 2021 9354255 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Masculine scores	Health Effect: Neurological/Behavioral-Preschool Activities Inventory (PSAI) scores for masculine, feminine, and composite-Non-cancer. Outcome measure: Preschool Activities Inventory Modified (PSAI-M)	Pregnant people. Preschool (3-5), Adults (18+). United States; California, New York, Washington, Minnesota. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-child pairs from the TIDES cohort study (enrolled n=969, used in study n=498, used in analysis n=255 girls). The Infant Development and the Environment Study (TIDES). 2010-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during third trimester.	Linear Regression. Confounders adjusted for: child age, maternal education, race, same sex older sibling, parental attitudes.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted regression coefficient (95% CI)MiBP: 2.7 (0.7, 4.7). Significant negative association between MiBP phthalate concentrations and masculine scores in girls.	Evans et. al 2021 9354255 Medium
Metabolic syndrome (MetS)	Health Effect: Nutritional/Metabolic-Metabolic syndrome, number of metabolic syndrome components, fasting blood glucose (FBG), waist circumference-Non-cancer. Outcome measure: NHANES MEC physical examinations and laboratory analyses	General public. Teens (12-17), Adults (18+). United States. Female, Male. Cross-Sectional. PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Adolescents (age 11 years through < 21 years). 918 adolescents (501 males, 417 females), 45 MetS cases, 873 non-MetS. NHANES. 2003-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring concurrent with outcome.	Logistic Regression. Confounders adjusted for: urinary creatinine, race/ethnicity, total caloric intake, fat intake, economic adversity, age, and sex.	Lowest exposure concentration for a significant adverse health outcome response: T2 (levels reported in STable 1). MnBP: OR (95% CI) for T2 vs. T1: 2.66 (0.98–7.24); T3 vs T1: 2.11 (0.71–6.27); in no economic adversity group: T2 vs T1: 4.22 (1.25–14.25); T3 vs T1: 4.21 (0.97–18.31). MnBP: Positive and significant (at p<0.10) associations with MetS in T2 vs T1 overall, in men, and in individuals in the no economic adversity group. MCPP: No significant associations for MCPP and MetS..	Gaston et. al 2019 5433529 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Triglycerides	Health Effect: Cardiovascular-Blood pressure, serum lipids (triglycerides (TG), high-density lipoprotein cholesterol (HDL))-Non-cancer. Outcome measure: NHANES MEC physical examinations and laboratory analyses	General public. Teens (12-17), Adults (18+). United States. Female, Male. Cross-Sectional. PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Adolescents (age 11 years through < 21 years). 918 adolescents (501 males, 417 females), 45 MetS cases, 873 non-MetS. NHANES. 2003-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring concurrent with outcome.	Logistic Regression. Confounders adjusted for: urinary creatinine, race/ethnicity, total caloric intake, fat intake, economic adversity, age, and sex.	Lowest exposure concentration for a significant adverse health outcome response: T3 (levels reported in STable 1). MnBP: OR (95% CI) for T2 vs. T1: 1.34 (0.83–2.14); T3 vs T1: 1.86 (1.16–2.99). MnBP: Positive and significant (at p<0.05) associations with elevated TG in T3 vs T1, elevated but not significant forT2 vs T1. p-value for interaction between MnBP and sex <0.01.MCPP: No significant associations with TG..	Gaston et. al 2019 5433529 Medium
Fasting blood glucose	Health Effect: Nutritional/Metabolic-Metabolic syndrome, number of metabolic syndrome components, fasting blood glucose (FBG), waist circumference-Non-cancer. Outcome measure: NHANES MEC physical examinations and laboratory analyses	General public. Teens (12-17), Adults (18+). United States. Female, Male. Cross-Sectional. PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Adolescents (age 11 years through < 21 years). 918 adolescents (501 males, 417 females), 45 MetS cases, 873 non-MetS. NHANES. 2003-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring concurrent with outcome.	Logistic Regression. Confounders adjusted for: urinary creatinine, race/ethnicity, total caloric intake, fat intake, economic adversity, age, and sex.	Lowest exposure concentration for a significant adverse health outcome response: T3 (levels reported in STable 1). MnBP: OR (95% CI) for T2 vs. T1: 0.27 (0.07–0.99); T3 vs. T1: 0.64 (0.12–3.25)MCPP: OR (95% CI) for T2 vs. T2: 3.25 (0.86–12.25); T3 vs. T1: 3.22 (0.95–10.93). MnBP: Inverse and significant (at p<0.05) association with high FBG in T2 vs T1, inverse but not significant for T3 vs T1. MCPP: Positive and significant (at p<0.10) association with high FBG in T2 vs. T1 and T3 vs. T1..	Gaston et. al 2019 5433529 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Waist circumference	Health Effect: Nutritional/Metabolic-Metabolic syndrome, number of metabolic syndrome components, fasting blood glucose (FBG), waist circumference-Non-cancer-Reproductive/Developmental-Waist circumference-Non-cancer. Outcome measure: NHANES MEC physical examinations and laboratory analyses	General public. Teens (12-17), Adults (18+). United States. Female, Male. Cross-Sectional. PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Adolescents (age 11 years through < 21 years). 918 adolescents (501 males, 417 females), 45 MetS cases, 873 non-MetS. NHANES. 2003-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring concurrent with outcome.	Logistic Regression. Confounders adjusted for: urinary creatinine, race/ethnicity, total caloric intake, fat intake, economic adversity, age, and sex.	Lowest exposure concentration for a significant adverse health outcome response: T3 (levels reported in STable 1). MnBP: OR (95% CI) for T2 vs. T1: 2.17 (1.10–4.32); T3 vs. T1: 1.72 (0.81–3.65). MnBP: Inverse and significant (at $p<0.05$) association with high waist circumference in T2 vs T1, inverse but not significant for T3 vs T1. MCPP: No significant associations with high waist circumference.	Gaston et. al 2019 5433529 Medium
Blood pressure	Health Effect: Cardiovascular-Blood pressure, serum lipids (triglycerides (TG), high-density lipoprotein cholesterol (HDL))-Non-cancer. Outcome measure: NHANES MEC physical examinations and laboratory analyses	General public. Teens (12-17), Adults (18+). United States. Female, Male. Cross-Sectional. PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Adolescents (age 11 years through < 21 years). 918 adolescents (501 males, 417 females), 45 MetS cases, 873 non-MetS. NHANES. 2003-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring concurrent with outcome.	Logistic Regression. Confounders adjusted for: urinary creatinine, race/ethnicity, total caloric intake, fat intake, economic adversity, age, and sex.	Lowest exposure concentration for a significant adverse health outcome response: T3 (levels reported in STable 1). MnBP: OR (95% CI) for T2 vs. T1: 0.36 (0.17–0.77); T3 vs. T1: 0.32 (0.12–0.87)MCPP: OR (95% CI) for T2 vs. T1: 0.86 (0.40–1.82); T3 vs. T1: 0.33 (0.13–0.83). MnBP: Inverse and significant (at $p<0.05$) association with elevated BP in T2 vs. T1 and T3 vs. T1. Interaction term with sex significant at $p<0.1$.MCPP: Inverse and significant (at $p<0.05$) association with elevated BP in T3 vs. T1, inverse but not significant for T2 vs. T1. Interaction term with sex significant at $p<0.1$..	Gaston et. al 2019 5433529 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
HDL cholesterol	Health Effect: Cardiovascular-Blood pressure, serum lipids (triglycerides (TG), high-density lipoprotein cholesterol (HDL))-Non-cancer. Outcome measure: NHANES MEC physical examinations and laboratory analyses	General public. Teens (12-17), Adults (18+). United States. Female, Male. Cross-Sectional. PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Adolescents (age 11 years through < 21 years). 918 adolescents (501 males, 417 females), 45 MetS cases, 873 non-MetS. NHANES. 2003-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring concurrent with outcome.	Logistic Regression. Confounders adjusted for: urinary creatinine, race/ethnicity, total caloric intake, fat intake, economic adversity, age, and sex.	Lowest exposure concentration for a significant adverse health outcome response: T3 (levels reported in STable 1). MnBP: OR (95% CI) for T2 vs. T1: 1.81 (0.92–3.50); T3 vs. T1: 1.63 (0.80–3.33)MCPP: OR (95% CI) for T2 vs. T1: 0.99 (0.55–1.78); T3 vs. T1: 1.74 (0.92–3.30). MnBP: Positive and significant (at $p<0.1$) association with low HDL cholesterol in T2 vs. T1, positive but non-significant association for T3 vs. T1. Interaction term with sex significant at $p<0.1$.MCPP: Positive but non-significant association with low HDL cholesterol in T2 vs. T1, positive and significant (at $p<0.1$) association in T3 vs. T1..	Gaston et. al 2019 5433529 Medium
Blood pressure	Health Effect: Cardiovascular-Blood pressure, serum lipids (triglycerides (TG), high-density lipoprotein cholesterol (HDL))-Non-cancer. Outcome measure: NHANES MEC physical examinations and laboratory analyses	General public. Teens (12-17), Adults (18+). United States. Female, Male. Cross-Sectional. PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Adolescents (age 11 years through < 21 years). 918 adolescents (501 males, 417 females), 45 MetS cases, 873 non-MetS. NHANES. 2003-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring concurrent with outcome.	Logistic Regression. Confounders adjusted for: urinary creatinine, race/ethnicity, total caloric intake, fat intake, economic adversity, age, and sex.	Lowest exposure concentration for a significant adverse health outcome response: T3 (levels reported in STable 1). OR (95% CI) for T2 vs. T1: 0.57 (0.25, 1.30); T3 vs. T1: 0.46 (0.20, 1.05). Inverse and significant (at $p<0.1$) association with elevated BP in T3 vs. T1, inverse but not significant association for T2 vs. T1..	Gaston et. al 2019 5433529 Medium

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Diethylhexyl Phthalate

Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP); Mono-(2-ethyl-5-carboxypentyl)phthalate (MECPP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
HDL cholesterol	Health Effect: Cardiovascular-Blood pressure, serum lipids (triglycerides (TG), high-density lipoprotein cholesterol (HDL))-Non-cancer. Outcome measure: NHANES MEC physical examinations and laboratory analyses	General public. Teens (12-17), Adults (18+). United States. Female, Male. Cross-Sectional. PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Adolescents (age 11 years through < 21 years). 918 adolescents (501 males, 417 females), 45 MetS cases, 873 non-MetS. NHANES. 2003-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring concurrent with outcome.	Logistic Regression. Confounders adjusted for: urinary creatinine, race/ethnicity, total caloric intake, fat intake, economic adversity, age, and sex.	Lowest exposure concentration for a significant adverse health outcome response: T3 (levels reported in STable 1). OR (95% CI) for T2 vs. T1: 1.64 (0.91–2.89); T3 vs. T1: 1.20 (0.66–2.17). Positive and significant at ($p<0.1$) association with low HDL cholesterol in T2 vs. T1; positive but not significant association in T3 vs. T1..	Gaston et. al 2019 5433529 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Body mass index	Health Effect: Reproductive/Developmental-Body mass index (BMI)-Non-cancer-Nutritional/Metabolic-Body mass index (BMI)-Non-cancer. Outcome measure: Directly measured via standardized equipment	General public, Pregnant people. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). United States; California, Salinas Valley. Female, Male. Cohort (Prospective). PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Low-income US born Latino children (n=162 male and n=173 female children). Center for the Health Assessment of Mothers and Children of Salinas (CHAMACOS). Enrollment: 1999-2000; Follow-up: Up to 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Growth Mixture Models. Confounders adjusted for: maternal pre-pregnancy BMI, gestational weight gain, diet quality index during pregnancy, smoking during pregnancy, education, marital status, age, number of years in the US.	Lowest exposure concentration for a significant adverse health outcome response: continuous. No effect estimates presented.. ”Higher MECPP exposure associated with moderatelyincreasing BMI trajectory for boys. DEHP metabolitesassociated with initial high increase in BMI that levels ofat puberty in girls.”.	Heggeseth et. al 2019 5514974 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Body mass index	Health Effect: Reproductive/Developmental-Body mass index (BMI)-Non-cancer-Nutritional/Metabolic-Body mass index (BMI)-Non-cancer. Outcome measure: Directly measured via standardized equipment	General public, Pregnant people. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). United States; California, Salinas Valley. Female, Male. Cohort (Prospective). PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Low-income US born Latino children (n=162 male and n=173 female children). Center for the Health Assessment of Mothers and Children of Salinas (CHAMACOS). Enrollment: 1999-2000; Follow-up: Up to 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Regression trees. Confounders adjusted for: maternal pre-pregnancy BMI, gestational weight gain, diet quality index during pregnancy, smoking during pregnancy, education, marital status, age, number of years in the US.	Lowest exposure concentration for a significant adverse health outcome response: continuous. No effect estimates presented.. ”MnBP can explain variation in BMI trajectories among boys.”.	Heggeseth et. al 2019 5514974 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Body mass index	Health Effect: Reproductive/Developmental-Body mass index (BMI)-Non-cancer-Nutritional/Metabolic-Body mass index (BMI)-Non-cancer. Outcome measure: Directly measured via standardized equipment	General public, Pregnant people. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). United States; California, Salinas Valley. Female, Male. Cohort (Prospective). PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Low-income US born Latino children (n=162 male and n=173 female children). Center for the Health Assessment of Mothers and Children of Salinas (CHAMACOS). Enrollment: 1999-2000; Follow-up: Up to 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Regression trees. Confounders adjusted for: maternal pre-pregnancy BMI, gestational weight gain, diet quality index during pregnancy, smoking during pregnancy, education, marital status, age, number of years in the US.	Lowest exposure concentration for a significant adverse health outcome response: continuous. No effect estimates presented.. ”MiBP can explain variation in BMI trajectories among boys.”.	Heggeseth et. al 2019 5514974 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Neurodevelopmental outcomes: executive function; cognition; social cognition; and attention and behavior	Health Effect: Neurological/Behavioral-Executive Function, Social Cognition, Cognition/Intelligence, Attention and Behavior.-Non-cancer. Outcome measure: Standardized assessments administered by study staff or completed by parents and/or teachers. Includes BRIEF, NEPSY tower, Wisconsin Card Sort, Wechsler Intelligence Scale, Social Responsiveness Scale, BASC, Connors ADHD/DSM-IV scale, CPT II	General public, Pregnant people. Middle childhood (6-11), Teens (12-17), Adults (18+). United States; Salinas Valley, California. Female, Male. Cohort (Prospective). PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Adolescents (age 11 years through < 21 years). Low-income US born Mexican-American children (n=334) followed prenatally through age 16 years. CHAMACOS (Center for the Health Assessment of Mothers and Children of Salinas) birth cohort. Recruitment: 1999-2000; Follow-up: 2015-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Generalized linear mixed model. Confounders adjusted for: maternal age, education, country of birth, and depression at time of assessment; child sex, age at assessment, and language; HOME score, household income at assessment.	Lowest exposure concentration for a significant adverse health outcome response: Continuous; Geometric mean (GSD) ∑DEHP metabolites = 0.2 (2.2) nmol/mL. Beta (95% CI) per log2 increase in ∑DEHP metabolites:Cognitive outcomes: *Full scale IQ at ages 7y and 10.5y: -boys = -1.7 (-3.8, 0.3) -girls = 1.6 (0.0, 3.2) -(interaction p=0.01). *Working memory IQ at ages 7y and 10.5y: -boys = -1.9 (-3.9, 0.1) -girls = 1.6 (0.1, 3.2) -(interaction p<0.01).*Perceptual reasoning IQ at ages 7y and 10.5y: - boys = -1.4 (-3.3, 0.4) -girls = 1.4 (-0.6, 3.5) -(interaction p=0.04).*Processing speed IQ at ages 7y and 10.5y: -boys = -0.8 (-2.7, 1.1) -girls = 1.5 (0.1, 2.8) -(interaction p=0.05).Social cognitive outcomes:-Social cognition at age 9y (ENI-Evaluación Neuropsicológica del Niño scores): all children = 0.1 (0.0,0.2); boys = 0.0 (-0.2, 0.2);girls = 0.2 (0.0, 0.4);(interaction p = 0.10).Beta (95% CI) per tertile increase in ∑DEHP metabolites:Behavior:-Anxiety scale, teacher report age 7y: all T2 = -3.6 (-7.3, 0.1), T3 = -4.5 (-8.1, -0.9);boys T2 = -2.6 (-7.4, 2.2), T3 = -2.9 (-8.5, 2.8); girls T2 = -4.4 (-9.9, 1.2), T3 = -6.7 (-12.2, -1.1). Higher concentrations of ∑DEHP metabolites during pregnancy were associated with near-significantly higher mean standardized IQ scores (overall and several sub-domains) in girls, but with marginally non-significant lower scores in boys (sex interaction p-values significant). Associations with the verbal comprehension IQ sub-domain were weaker and ns. Higher ∑DEHP was also associated with higher social cognition in girls, and with lower teacher-reported anxiety at age 7y, particularly in girls..	Hyland et. al 2019 6815846 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Neurodevelopmental outcomes: executive function; cognition; social cognition; and attention and behavior	Health Effect: Neurological/Behavioral-Executive Function, Social Cognition, Cognition/Intelligence, Attention and Behavior.-Non-cancer. Outcome measure: Standardized assessments administered by study staff or completed by parents and/or teachers. Includes BRIEF, NEPSY tower, Wisconsin Card Sort, Wechsler Intelligence Scale, Social Responsiveness Scale, BASC, Connors ADHD/DSM-IV scale, CPT II	General public, Pregnant people. Middle childhood (6-11), Teens (12-17), Adults (18+). United States; Salinas Valley, California. Female, Male. Cohort (Prospective). PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Adolescents (age 11 years through < 21 years). Low-income US born Mexican-American children (n=334) followed prenatally through age 16 years. CHAMACOS (Center for the Health Assessment of Mothers and Children of Salinas) birth cohort. Recruitment: 1999-2000; Follow-up: 2015-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Generalized linear mixed model. Confounders adjusted for: maternal age, education, country of birth, and depression at time of assessment; child sex, age at assessment, and language; HOME score, household income at assessment.	Lowest exposure concentration for a significant adverse health outcome response: Continuous; Geometric mean (GSD) for: MEHP = 4.5 (2.6) ng/mL; MEHHP = 18.9 (2.4) ng/mL; MECPP = 32.4 (2.2) ng/mL; MEOHP = 13.8 (2.4) ng/mL. Beta (95% CI) per log2 increase in individual DEHP metabolites:ENI-Evaluación Neuropsicológica del Niño scores at age 14y: MEHHP = 0.1 (0.0, 0.2);MECPP = 0.1 (0.0, 0.2);MEOHP = 0.1 (0.0, 0.2). Higher concentrations of MEHHP, MECPP and MEOPH during pregnancy were associated with near-significantly higher mean parental social responsiveness scale ratings..	Hyland et. al 2019 6815846 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Neurodevelopmental outcomes: executive function; cognition; social cognition; and attention and behavior	Health Effect: Neurological/Behavioral-Executive Function, Social Cognition, Cognition/Intelligence, Attention and Behavior.-Non-cancer. Outcome measure: Standardized assessments administered by study staff or completed by parents and/or teachers. Includes BRIEF, NEPSY tower, Wisconsin Card Sort, Wechsler Intelligence Scale, Social Responsiveness Scale, BASC, Connors ADHD/DSM-IV scale, CPT II	General public, Pregnant people. Middle childhood (6-11), Teens (12-17), Adults (18+). United States; Salinas Valley, California. Female, Male. Cohort (Prospective). PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Adolescents (age 11 years through < 21 years). Low-income US born Mexican-American children (n=334) followed prenatally through age 16 years. CHAMACOS (Center for the Health Assessment of Mothers and Children of Salinas) birth cohort. Recruitment: 1999-2000; Follow-up: 2015-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Generalized linear mixed model. Confounders adjusted for: maternal age, education, country of birth, and depression at time of assessment; child sex, age at assessment, and language; HOME score, household income at assessment.	Lowest exposure concentration for a significant adverse health outcome response: Continuous; Geometric mean (GSD) for MiBP= 3.4 (2.7) ng/mL. Beta (95% CI) per log2 increase in MiBP:-Processing Speed IQ = 0.9 (0.0, 1.8). Higher concentrations of MiBP during pregnancy were associated with near-significantly higher mean Processing Speed IQ at ages 7 and 10.5 years..	Hyland et. al 2019 6815846 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Neurodevelopmental outcomes: executive function; cognition; social cognition; and attention and behavior	Health Effect: Neurological/Behavioral-Executive Function, Social Cognition, Cognition/Intelligence, Attention and Behavior.-Non-cancer. Outcome measure: Standardized assessments administered by study staff or completed by parents and/or teachers. Includes BRIEF, NEPSY tower, Wisconsin Card Sort, Wechsler Intelligence Scale, Social Responsiveness Scale, BASC, Connors ADHD/DSM-IV scale, CPT II	General public, Pregnant people. Middle childhood (6-11), Teens (12-17), Adults (18+). United States; Salinas Valley, California. Female, Male. Cohort (Prospective). PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Adolescents (age 11 years through < 21 years). Low-income US born Mexican-American children (n=334) followed prenatally through age 16 years. CHAMACOS (Center for the Health Assessment of Mothers and Children of Salinas) birth cohort. Recruitment: 1999-2000; Follow-up: 2015-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Generalized linear mixed model. Confounders adjusted for: maternal age, education, country of birth, and depression at time of assessment; child sex, age at assessment, and language; HOME score, household income at assessment.	Lowest exposure concentration for a significant adverse health outcome response: Continuous; Geometric mean (GSD) for MBzP = 8.9 (2.6) ng/mL. Beta (95% CI) per log2 increase in MBzP:-Internalizing Problems at age 16y, parent report = 0.7 (0.0, 1.4)-Depression scale at age 16y, parent report = 0.8 (0.0, 1.5). Higher concentrations of MBzP during pregnancy were associated with near-significantly higher parent ratings for internalizing problems and depression at age 16y..	Hyland et. al 2019 6815846 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Asthma, atopy	Health Effect: Lung/Respiratory-Asthma-Non-cancer-Immune/Hematological-Immunoglobulin E (IgE) levels to inhalant allergens-Non-cancer. Outcome measure: Asthma: physician diagnosis; atopy: immunoglobulin E levels against inhalant allergens	General public, Pregnant people. Preschool (3-5), Middle childhood (6-11), Adults (18+). Germany; Leipzig. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Mother-child pairs in Leipzig, Germany (n=371 pairs). Lifestyle and Environmental Factors and Their Influence on Newborns Allergy Risk (LINA) cohort. Recruitment: during pregnancy 2006-2008; Follow-up: through child age 6.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Logistic Regression. Confounders adjusted for: child gender, siblings, smoking during pregnancy, environmental tobacco smoke after birth, cat keeping, parental history of atopy, parental education level.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for a 100 ng/mg unit increase of MnBP: Asthma: 1.24 (1.02, 1.50)Atopy: 1.21 (1.04, 1.41). Significant positive associations between MnBP and both asthma and atopy. No significant associations with MBzP..	Jahreis et. al 2018 5490441 Medium
blood glucose levels	Health Effect: Nutritional/Metabolic-pregnancy glucose levels-Non-cancer. Outcome measure: Medical records	Patients in clinics, Pregnant people. Adults (18+). USA; Massachusetts. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Sub-analysis of the EARTH study (2005-2015), pregnant women aged 18-46 years (n=245). Environment and Reproductive Health (EARTH). 2005-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during the 1st and/or 2nd trimester prior to outcome ascertainment for all but 8 participants, whose exposure was measured simultaneously with outcome.	Linear Regression. Confounders adjusted for: maternal age (years), overweight/obese (yes/no) total physical activity (hr/week), race (white, non-white), family history of diabetes (yes, no), infertility diagnosis (male factor, female factor, unexplained), number of fetus (1, 2).	Lowest exposure concentration for a significant adverse health outcome response: 2nd trimester MIBP, 4th quartile: 10.9-163 ug/L. Population means of 2nd trimester blood glucose (mg/dL) (95% CI) per quartile MiBP:Q1: 119 (113, 126)Q2: 115 (109, 122)Q3: 115 (109, 122)Q4: 105 (99, 111)p-trend = 0.003. For MiBP measured during the 2nd trimester, a significant reduction in population means of blood glucose levels was reported when comparing quartile 4 to quartile 1; no other significant associations were reported..	James-Todd et. al 2018 4728454 High

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Overweight, central obesity, insulin resistance	Health Effect: Nutritional/Metabolic-Obesity markers (BMI percentile, WC, and body fat percentage) and insulin resistance (HOMA-IR index)-Non-cancer. Outcome measure: Overweight: defined as BMI greater than or equal to 85th percentile; central obesity: defined as waist circumference greater than or equal to 90th percentile ; insulin resistance: HOMA-IR index (calculated as fasting glucose (mg/dL) x fasting insulin (uU/mL)/405.	General public, Patients in clinics. Middle childhood (6-11), Teens (12-17). South Korea; Seoul. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Overweight and non-overweight Korean girls from Inje University Sanggye Paik Hospital in Seoul, South Korea (65 overweight girls and 72 age-matched controls). Recruitment: March 2015 - September 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured at time of physical exam sometime between March and September 2015.	Linear Regression. Confounders adjusted for: age, Tanner stage, height/BMI percentile.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression Coefficient (95% CI) per 1 log10 unit increase in percent fraction DEHP metabolite. MEHHP%, BMI percentile = 1.93 (0.18, 3.70). MEHHP%, WC (cm) = 0.67 (0.15, 1.19). MEHHP%, body fat (%) = 0.60 (0.03, 1.18).Possible EE to extract from Figure 4.. MEHHP% was significantly associated with BMI percentile, WC, and body fat percentage in the prepubertal girls.There is a significantly increased mean HOMA-IR for Q2 and Q4 among prepubertal girls (results only present in Figure 4)..	Kim et. al 2018 5043517 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Full-Scale IQ	Health Effect: Neurological/Behavioral-Full-scale IQ at age 5 years (Wechsler Preschool and Primary Scale of Intelligence-III [WPPSI-III]) and full scale IQ at age 8 years (Wechsler Intelligence Scale for Children-IV [WISC-IV]))-Non-cancer. Outcome measure: Wechsler Intelligence Scales	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Adults (18+). United States; Cincinnati, OH. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Children (n=253) from greater Cincinnati, OH whose mothers were recruited during pregnancy in 2003-2006, followed through age 8y.. Health Outcomes and Measures of the Environment (HOME) Study. Recruitment 2003-2006; Follow-up 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy and annually from ages 1-5y and at age 8y.	Generalized linear mixed model. Confounders adjusted for: maternal age, education, marital status, IQ, serum cotinine in pregnancy and pre-pregnancy BMI along with household income, child race, child sex, HOME scores.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta (95% CI) for association between log10 sum of DEHP metabolites in urine at age 3 years and full-scale IQ at age 5 or 8 years: -1.9 (-3.7, -0.2). The sum of DEHP metabolites in age 3y urine was associated with significantly lower full scale IQ at ages 5 or 8 years. DEHP in urine from other time periods was not associated with significant differences in IQ scores..	Li et. al 2019 5053633 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Full-Scale IQ	Health Effect: Neurological/Behavioral-Full-scale IQ at age 5 years (Wechsler Preschool and Primary Scale of Intelligence-III [WPPSI-III]) and full scale IQ at age 8 years (Wechsler Intelligence Scale for Children-IV [WISC-IV]))-Non-cancer. Outcome measure: Wechsler Intelligence Scales	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Adults (18+). United States; Cincinnati, OH. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Children (n=253) from greater Cincinnati, OH whose mothers were recruited during pregnancy in 2003-2006, followed through age 8y.. Health Outcomes and Measures of the Environment (HOME) Study. Recruitment 2003-2006; Follow-up 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy and annually from ages 1-5y and at age 8y.	Generalized linear mixed model. Confounders adjusted for: maternal age, education, marital status, IQ, serum cotinine in pregnancy and pre-pregnancy BMI along with household income, child race, child sex, HOME scores.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta (95% CI) for association between log10 MBzP and full-scale IQ at age 5 or 8 years: -MBzP in urine at age 3y = -2.5 (-4.4, -0.6)-MBzP in urine at age 8y= -1.8 (-3.5, -0.1). MBzP in urine collected at ages 3 and 8 years was associated with significantly lower full scale IQ at ages 5 or 8 years. MBzP in urine from other time periods was not associated with significant differences in IQ scores..	Li et. al 2019 5053633 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Full-Scale IQ	Health Effect: Neurological/Behavioral-Full-scale IQ at age 5 years (Wechsler Preschool and Primary Scale of Intelligence-III [WPPSI-III]) and full scale IQ at age 8 years (Wechsler Intelligence Scale for Children-IV [WISC-IV]))-Non-cancer. Outcome measure: Wechsler Intelligence Scales	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Adults (18+). United States; Cincinnati, OH. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Children (n=253) from greater Cincinnati, OH whose mothers were recruited during pregnancy in 2003-2006, followed through age 8y.. Health Outcomes and Measures of the Environment (HOME) Study. Recruitment 2003-2006; Follow-up 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy and annually from ages 1-5y and at age 8y.	Generalized linear mixed model. Confounders adjusted for: maternal age, education, marital status, IQ, serum cotinine in pregnancy and pre-pregnancy BMI along with household income, child race, child sex, HOME scores.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta (95% CI) for association between log10 MnBP and full-scale IQ at age 5 or 8 years: -MnBP in urine at age 4y = 2.1 (0.3, 3.9). MnBP in urine collected at age 4y was associated with significantly higher full scale IQ at ages 5 or 8 years. MnBP in urine from other time periods was not associated with significant differences in IQ scores..	Li et. al 2019 5053633 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Full-Scale IQ	Health Effect: Neurological/Behavioral-Full-scale IQ at age 5 years (Wechsler Preschool and Primary Scale of Intelligence-III [WPPSI-III]) and full scale IQ at age 8 years (Wechsler Intelligence Scale for Children-IV [WISC-IV]))-Non-cancer. Outcome measure: Wechsler Intelligence Scales	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Adults (18+). United States; Cincinnati, OH. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Children (n=253) from greater Cincinnati, OH whose mothers were recruited during pregnancy in 2003-2006, followed through age 8y.. Health Outcomes and Measures of the Environment (HOME) Study. Recruitment 2003-2006; Follow-up 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy and annually from ages 1-5y and at age 8y.	Generalized linear mixed model. Confounders adjusted for: maternal age, education, marital status, IQ, serum cotinine in pregnancy and pre-pregnancy BMI along with household income, child race, child sex, HOME scores.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta (95% CI) for association between log10 MiBP and full-scale IQ at age 5 or 8 years: -MiBP in urine at age 4y = 1.8 (0.0, 3.6). MiBP in urine collected at age 4y was associated with significantly higher full scale IQ at ages 5 or 8 years. MiBP in urine from other time periods was not associated with significant differences in IQ scores..	Li et. al 2019 5053633 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Childhood behavior (includes internalizing problems, externalizing problems, a behavioral symptoms index and individual clinical subscales)	Health Effect: Neurological/Behavioral-Child behavior, as reported by parents or caregivers using the Behavioral Assessment System for Children-2 (BASC-2) (internalizing problems, externalizing problems, Behavioral Symptoms Index [BSI]) and nine clinical subscales.-Non-cancer. Outcome measure: Behavioral Assessment System for Children-2 (BASC-2), parent/caregiver report	General public, Pregnant people. Toddler (2-3), Preschool (3-5), Middle childhood (6-11). United States; Cincinnati, OH. Female, Male. Cohort (Prospective). PESS: Lifestage , Other PESS category specified in the reference. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Birth cohort of children from greater Cincinnati residing in homes build prior to 1978 during pregnancy. Health Outcomes and Measures of the Environment (HOME) study. Recruitment 2003 to 2006 during pregnancy; Follow-up at ages 1-5 years and at age 8 years.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during pregnancy and repeatedly during childhood.	Generalized linear mixed model. Confounders adjusted for: Maternal age, pre-pregnancy BMI, cotinine levels in pregnancy, maternal depression, alcohol use in pregnancy, maternal education, marital status, child sex, race/ethnicity, and age at outcome assessment.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted beta (95% CI) for difference in subscale scores per1 IQR increase in log10 childhood DEHP: Anxiety = -2.3 (-4.4, -0.2)Somatization = 1.9 (0.0, 3.8)Atypicality = 2.9 (0.3, 5.5). The sum of three DEHP metabolites in childhood was associated with significantly higher child behavior scores for somatization and atypicality, and significantly lower scores for anxiety..	Li et. al 2020 9419532 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Childhood behavior (includes internalizing problems, externalizing problems, a behavioral symptoms index and individual clinical subscales)	Health Effect: Neurological/Behavioral-Child behavior, as reported by parents or caregivers using the Behavioral Assessment System for Children-2 (BASC-2) (internalizing problems, externalizing problems, Behavioral Symptoms Index [BSI]) and nine clinical subscales.-Non-cancer. Outcome measure: Behavioral Assessment System for Children-2 (BASC-2), parent/caregiver report	General public, Pregnant people. Toddler (2-3), Preschool (3-5), Middle childhood (6-11). United States; Cincinnati, OH. Female, Male. Cohort (Prospective). PESS: Lifestage , Other PESS category specified in the reference. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Birth cohort of children from greater Cincinnati residing in homes build prior to 1978 during pregnancy. Health Outcomes and Measures of the Environment (HOME) study. Recruitment 2003 to 2006 during pregnancy; Follow-up at ages 1-5 years and at age 8 years.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during pregnancy and repeatedly during childhood.	Generalized linear mixed model. Confounders adjusted for: Maternal age, pre-pregnancy BMI, cotinine levels in pregnancy, maternal depression, alcohol use in pregnancy, maternal education, marital status, child sex, race/ethnicity, and age at outcome assessment.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted beta (95% CI) for difference in subscale scores per1 IQR increase in log10 childhood MnBP: Aggression = 1.8 (0.2, 3.4). Higher MnBP in childhood was associated with significantly higher child behavior scores for aggression..	Li et. al 2020 9419532 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Childhood behavior (includes internalizing problems, externalizing problems, a behavioral symptoms index and individual clinical subscales)	Health Effect: Neurological/Behavioral-Child behavior, as reported by parents or caregivers using the Behavioral Assessment System for Children-2 (BASC-2) (internalizing problems, externalizing problems, Behavioral Symptoms Index [BSI]) and nine clinical subscales.-Non-cancer. Outcome measure: Behavioral Assessment System for Children-2 (BASC-2), parent/caregiver report	General public, Pregnant people. Toddler (2-3), Preschool (3-5), Middle childhood (6-11). United States; Cincinnati, OH. Female, Male. Cohort (Prospective). PESS: Lifestage , Other PESS category specified in the reference. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Birth cohort of children from greater Cincinnati residing in homes build prior to 1978 during pregnancy. Health Outcomes and Measures of the Environment (HOME) study. Recruitment 2003 to 2006 during pregnancy; Follow-up at ages 1-5 years and at age 8 years.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during pregnancy and repeatedly during childhood.	Generalized linear mixed model. Confounders adjusted for: Maternal age, pre-pregnancy BMI, cotinine levels in pregnancy, maternal depression, alcohol use in pregnancy, maternal education, marital status, child sex, race/ethnicity, and age at outcome assessment.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted beta (95% CI) for difference in subscale scores per1 IQR increase in log10 childhood MBzP: Behavioral Symptom Index = 1.4 (0.0, 2.7) Depression= 1.3 (0.0, 2.7)Somatization = 1.3 (0.0, 2.7)Conduct problems = 3.0 (0.8, 5.1). Higher MBzP in childhood was associated with significantly higher child behavior scores for depression, somatization and conduct problems..	Li et. al 2020 9419532 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Total oocytes	Health Effect: Reproductive/Developmental- Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer. Outcome measure: Embryologists classified oocytes as germinal vesicle, metaphase I, metaphase II (MII), or degenerated. In ICSI, oocyte maturation was assessed during fertilization check. Oocyte maturity in conventional IVF was assessed as follows after removal of the cumulus/corona radiata cells at the fertilization check. The total number of mature oocytes in a conventional IVF cycle was determined by summing the number of oocytes exhibiting one or more pronucleus combined with those without a pronucleus but exhibiting a polar body. Embryologists determined normal fertilization 16 to 18 hours after insemination or ICSI as the number of oocytes with two pronuclei.All clinical information was abstracted from medical records	Pregnant people. Adults (18+). Israel; Sheba Medical Center. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Females undergoing in vitro. 2014-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via spot urine sample; majority of women provided one spot urine samples during ovarian stimulation and/or during the day of oocyte retrieval..	Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.	Lowest exposure concentration for a significant adverse health outcome response: T3: 6.08-70.6 μg/L. MEHP adjusted mean (95% CI): T3 vs T1: 8.9 (8.0-9.8), p-trend = 0.07.. MEHP had significantly reduced numbers of total oocytes for T3 versus T1. No significant results were found for MEHP and mature oocytes, fertilized oocytes, or top quality embryos, live birth or implantation following assisted reproduction..	Machtinger et. al 2018 5743382 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Total oocytes	Health Effect: Reproductive/Developmental- Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer. Outcome measure: Embryologists classified oocytes as germinal vesicle, metaphase I, metaphase II (MII), or degenerated. In ICSI, oocyte maturation was assessed during fertilization check. Oocyte maturity in conventional IVF was assessed as follows after removal of the cumulus/corona radiata cells at the fertilization check. The total number of mature oocytes in a conventional IVF cycle was determined by summing the number of oocytes exhibiting one or more pronucleus combined with those without a pronucleus but exhibiting a polar body. Embryologists determined normal fertilization 16 to 18 hours after insemination or ICSI as the number of oocytes with two pronuclei.All clinical information was abstracted from medical records	Pregnant people. Adults (18+). Israel; Sheba Medical Center. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women undergoing in vitro fertilization (IVF) (n = 136) from January 2014 through August 2016 in Israel. 2014-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via spot urine sample; majority of women provided one spot urine samples during ovarian stimulation and/or during the day of oocyte retrieval..	Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.	Lowest exposure concentration for a significant adverse health outcome response: T2: 0.12-0.22 μmol/L. ΣDEHP adjusted mean (95% CI): T2 vs T1 = 9.0 (8.1, 9.9) T3 vs T1 = 8.5 (7.7, 9.4), p-trend: less than 0.001; log ∑DEHP % change (95% CI): -7.3 (-13, -1.2). ΣDEHP had significantly reduced numbers of total oocytes reported for T2 and T3 versus T1. No significant associations with live birth or implantation following assisted reproduction..	Machtinger et. al 2018 5743382 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Mature oocytes	Health Effect: Reproductive/Developmental- Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer. Outcome measure: Embryologists classified oocytes as germinal vesicle, metaphase I, metaphase II (MII), or degenerated. In ICSI, oocyte maturation was assessed during fertilization check. Oocyte maturity in conventional IVF was assessed as follows after removal of the cumulus/corona radiata cells at the fertilization check. The total number of mature oocytes in a conventional IVF cycle was determined by summing the number of oocytes exhibiting one or more pronucleus combined with those without a pronucleus but exhibiting a polar body. Embryologists determined normal fertilization 16 to 18 hours after insemination or ICSI as the number of oocytes with two pronuclei.All clinical information was abstracted from medical records	Pregnant people. Adults (18+). Israel; Sheba Medical Center. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women undergoing in vitro fertilization (IVF) (n = 136) from January 2014 through August 2016 in Israel. 2014-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via spot urine sample; majority of women provided one spot urine samples during ovarian stimulation and/or during the day of oocyte retrieval..	Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.	Lowest exposure concentration for a significant adverse health outcome response: T2: 0.12-0.22 μmol/L. ΣDEHP adjusted mean (95% CI): T2 vs T1 = 7.3 (6.6, 8.1)T3 vs T1 = 7.1 (6.4, 7.9), p-trend = 0.02.. ΣDEHP had significantly reduced numbers of mature oocytes reported for T2 and T3 versus T1. No significant associations with DEHP % change and numbers of mature oocytes, live birth or implantation following assisted reproduction..	Machtinger et. al 2018 5743382 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Fertilized oocytes	Health Effect: Reproductive/Developmental-Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer. Outcome measure: Embryologists classified oocytes as germinal vesicle, metaphase I, metaphase II (MII), or degenerated. In ICSI, oocyte maturation was assessed during fertilization check. Oocyte maturity in conventional IVF was assessed as follows after removal of the cumulus/corona radiata cells at the fertilization check. The total number of mature oocytes in a conventional IVF cycle was determined by summing the number of oocytes exhibiting one or more pronucleus combined with those without a pronucleus but exhibiting a polar body. Embryologists determined normal fertilization 16 to 18 hours after insemination or ICSI as the number of oocytes with two pronuclei.All clinical information was abstracted from medical records	Pregnant people. Adults (18+). Israel; Sheba Medical Center. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women undergoing in vitro fertilization (IVF) (n = 136) from January 2014 through August 2016 in Israel. 2014-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via spot urine sample; majority of women provided one spot urine samples during ovarian stimulation and/or during the day of oocyte retrieval..	Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.	Lowest exposure concentration for a significant adverse health outcome response: T3: 0.22-2.65 μmol/L. ΣDEHP adjusted mean (95% CI): T3 vs T1 = 4.7 (4.1, 5.4), p-trend = 0.02.. ΣDEHP had significantly reduced numbers of fertilized oocytes reported for T3 versus T1. No significant associations with DEHP % change and numbers of mature oocytes, live birth or implantation following assisted reproduction..	Machtinger et. al 2018 5743382 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Top quality embryos	Health Effect: Reproductive/Developmental-Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer. Outcome measure: Top quality embryos were classified as those with 7–8 cells on day 3 (or in cases of day 2 transfer, 4 cells) and< 10% fragmentation.	Pregnant people. Adults (18+). Israel; Sheba Medical Center. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women undergoing in vitro fertilization (IVF) (n = 136) from January 2014 through August 2016 in Israel. 2014-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via spot urine sample; majority of women provided one spot urine samples during ovarian stimulation and/or during the day of oocyte retrieval..	Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.	Lowest exposure concentration for a significant adverse health outcome response: T2: 0.12-0.22 μmol/L. ΣDEHP adjusted mean (95% CI): T2 vs T1 = 2.2 (1.8, 2.7) T3 vs T1 = 1.9 (1.5, 2.3), p-trend = 0.02.. ΣDEHP had significantly reduced numbers of top quality embryos reported for T2 and T3 versus T1.ΣDEHP had significantly reduced numbers of fertilized oocytes reported for T3 versus T1. No significant associations with DEHP % change and numbers of mature oocytes, live birth or implantation following assisted reproduction..	Machtinger et. al 2018 5743382 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Total oocytes	Health Effect: Reproductive/Developmental- Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer. Outcome measure: Embryologists classified oocytes as germinal vesicle, metaphase I, metaphase II (MII), or degenerated. In ICSI, oocyte maturation was assessed during fertilization check. Oocyte maturity in conventional IVF was assessed as follows after removal of the cumulus/corona radiata cells at the fertilization check. The total number of mature oocytes in a conventional IVF cycle was determined by summing the number of oocytes exhibiting one or more pronucleus combined with those without a pronucleus but exhibiting a polar body. Embryologists determined normal fertilization 16 to 18 hours after insemination or ICSI as the number of oocytes with two pronuclei.All clinical information was abstracted from medical records	Pregnant people. Adults (18+). Israel; Sheba Medical Center. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women undergoing in vitro fertilization (IVF) (n = 136) from January 2014 through August 2016 in Israel. 2014-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via spot urine sample; majority of women provided one spot urine samples during ovarian stimulation and/or during the day of oocyte retrieval..	Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.	Lowest exposure concentration for a significant adverse health outcome response: T2: 9.74-17.9 μg/L. MEHHP adjusted mean (95% CI): T2 vs T1 = 9.3 (8.5, 10.3), T3 vs T1 = 7.9 (7.1, 8.7), p-trend: $<$0.001.. MEHHP had significantly reduced numbers of total oocytes reported for T2 and T3 versus T1. No significant associations with MEHHP and live birth or implantation following assisted reproduction..	Machtinger et. al 2018 5743382 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Mature oocytes	Health Effect: Reproductive/Developmental- Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer. Outcome measure: Embryologists classified oocytes as germinal vesicle, metaphase I, metaphase II (MII), or degenerated. In ICSI, oocyte maturation was assessed during fertilization check. Oocyte maturity in conventional IVF was assessed as follows after removal of the cumulus/corona radiata cells at the fertilization check. The total number of mature oocytes in a conventional IVF cycle was determined by summing the number of oocytes exhibiting one or more pronucleus combined with those without a pronucleus but exhibiting a polar body. Embryologists determined normal fertilization 16 to 18 hours after insemination or ICSI as the number of oocytes with two pronuclei.All clinical information was abstracted from medical records	Pregnant people. Adults (18+). Israel; Sheba Medical Center. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women undergoing in vitro fertilization (IVF) (n = 136) from January 2014 through August 2016 in Israel. 2014-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via spot urine sample; majority of women provided one spot urine samples during ovarian stimulation and/or during the day of oocyte retrieval..	Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.	Lowest exposure concentration for a significant adverse health outcome response: T2: 9.74-17.9 μg/L. MEHHP adjusted mean (95% CI): T2 vs T1 = 7.5 (6.8, 8.3) T3 vs T1 = 6.7 (6.0, 7.5), p-trend: $<$0.001.. MEHHP had significantly reduced numbers of mature oocytes reported for T2 and T3. No significant associations with MEHHP and live birth or implantation following assisted reproduction..	Machtinger et. al 2018 5743382 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Fertilized oocytes	Health Effect: Reproductive/Developmental-Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer. Outcome measure: Embryologists classified oocytes as germinal vesicle, metaphase I, metaphase II (MII), or degenerated. In ICSI, oocyte maturation was assessed during fertilization check. Oocyte maturity in conventional IVF was assessed as follows after removal of the cumulus/corona radiata cells at the fertilization check. The total number of mature oocytes in a conventional IVF cycle was determined by summing the number of oocytes exhibiting one or more pronucleus combined with those without a pronucleus but exhibiting a polar body. Embryologists determined normal fertilization 16 to 18 hours after insemination or ICSI as the number of oocytes with two pronuclei.All clinical information was abstracted from medical records	Pregnant people. Adults (18+). Israel; Sheba Medical Center. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women undergoing in vitro fertilization (IVF) (n = 136) from January 2014 through August 2016 in Israel. 2014-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via spot urine sample; majority of women provided one spot urine samples during ovarian stimulation and/or during the day of oocyte retrieval..	Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.	Lowest exposure concentration for a significant adverse health outcome response: T3: 18-215 μg/L. MEHHP adjusted mean (95% CI): T3 vs T1 = 4.6 (4.0, 5.2), p-trend = 0.006.. MEHHP had significantly reduced numbers of fertilized oocytes reported for T3. No significant associations with MEHHP and live birth or implantation following assisted reproduction..	Machtinger et. al 2018 5743382 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Top quality embryos	Health Effect: Reproductive/Developmental- Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer. Outcome measure: Top quality embryos were classified as those with 7–8 cells on day 3 (or in cases of day 2 transfer, 4 cells) and< 10% fragmentation.	Pregnant people. Adults (18+). Israel; Sheba Medical Center. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women undergoing in vitro fertilization (IVF) (n = 136) from January 2014 through August 2016 in Israel. 2014-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via spot urine sample; majority of women provided one spot urine samples during ovarian stimulation and/or during the day of oocyte retrieval..	Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.	Lowest exposure concentration for a significant adverse health outcome response: T3: 18-215 μg/L. MEHHP adjusted mean (95% CI): T3 vs T1 = 1.9 (1.5, 2.4), p-trend = 0.006.. MEHHP had significantly reduced numbers of top quality embryos reported for T3. No significant associations with MEHHP and live birth or implantation following assisted reproduction..	Machtinger et. al 2018 5743382 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Total oocytes	Health Effect: Reproductive/Developmental- Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer. Outcome measure: Embryologists classified oocytes as germinal vesicle, metaphase I, metaphase II (MII), or degenerated. In ICSI, oocyte maturation was assessed during fertilization check. Oocyte maturity in conventional IVF was assessed as follows after removal of the cumulus/corona radiata cells at the fertilization check. The total number of mature oocytes in a conventional IVF cycle was determined by summing the number of oocytes exhibiting one or more pronucleus combined with those without a pronucleus but exhibiting a polar body. Embryologists determined normal fertilization 16 to 18 hours after insemination or ICSI as the number of oocytes with two pronuclei.All clinical information was abstracted from medical records	Pregnant people. Adults (18+). Israel; Sheba Medical Center. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women undergoing in vitro fertilization (IVF) (n = 136) from January 2014 through August 2016 in Israel. 2014-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via spot urine sample; majority of women provided one spot urine samples during ovarian stimulation and/or during the day of oocyte retrieval..	Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.	Lowest exposure concentration for a significant adverse health outcome response: T2: 7.50-13.3 μg/L. MEOHP adjusted mean (95% CI): T2 vs T1 = 9.2 (8.1, 10.2)T3 vs T1 = 8.0 (7.2, 8.8), p-trend: $<$0.001.. MEOHP had significantly reduced numbers of total oocytes reported for T2 and T3.No significant associations with MEOHP and live birth or implantation following assisted reproduction..	Machtinger et. al 2018 5743382 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Mature oocytes	Health Effect: Reproductive/Developmental- Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer. Outcome measure: Embryologists classified oocytes as germinal vesicle, metaphase I, metaphase II (MII), or degenerated. In ICSI, oocyte maturation was assessed during fertilization check. Oocyte maturity in conventional IVF was assessed as follows after removal of the cumulus/corona radiata cells at the fertilization check. The total number of mature oocytes in a conventional IVF cycle was determined by summing the number of oocytes exhibiting one or more pronucleus combined with those without a pronucleus but exhibiting a polar body. Embryologists determined normal fertilization 16 to 18 hours after insemination or ICSI as the number of oocytes with two pronuclei.All clinical information was abstracted from medical records	Pregnant people. Adults (18+). Israel; Sheba Medical Center. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women undergoing in vitro fertilization (IVF) (n = 136) from January 2014 through August 2016 in Israel. 2014-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via spot urine sample; majority of women provided one spot urine samples during ovarian stimulation and/or during the day of oocyte retrieval..	Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.	Lowest exposure concentration for a significant adverse health outcome response: T2: 7.50-13.3 μg/L. MEOHP adjusted mean (95% CI): T2 vs T1 = 7.5 (6.8, 8.2) T3 vs T1 = 6.7, (6.0, 7.5), p-trend: $<$0.001.. MEOHP had significantly reduced numbers of mature oocytes reported for T2 and T3. No significant associations with MEOHP and live birth or implantation following assisted reproduction..	Machtinger et. al 2018 5743382 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Fertilized oocytes	Health Effect: Reproductive/Developmental- Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer. Outcome measure: Embryologists classified oocytes as germinal vesicle, metaphase I, metaphase II (MII), or degenerated. In ICSI, oocyte maturation was assessed during fertilization check. Oocyte maturity in conventional IVF was assessed as follows after removal of the cumulus/corona radiata cells at the fertilization check. The total number of mature oocytes in a conventional IVF cycle was determined by summing the number of oocytes exhibiting one or more pronucleus combined with those without a pronucleus but exhibiting a polar body. Embryologists determined normal fertilization 16 to 18 hours after insemination or ICSI as the number of oocytes with two pronuclei.All clinical information was abstracted from medical records	Pregnant people. Adults (18+). Israel; Sheba Medical Center. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women undergoing in vitro fertilization (IVF) (n = 136) from January 2014 through August 2016 in Israel. 2014-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via spot urine sample; majority of women provided one spot urine samples during ovarian stimulation and/or during the day of oocyte retrieval..	Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.	Lowest exposure concentration for a significant adverse health outcome response: T2: 7.50-13.3 μg/L. MEOHP adjusted mean (95% CI): T2 vs T1 = 5.1 (4.5, 5.8)T3 vs T1 = 4.5 (3.9, 5.1), p-trend = 0.002.. MEOHP had significantly reduced numbers of fertilized oocytes reported for T2 and T3. No significant associations with MEOHP and live birth or implantation following assisted reproduction..	Machtinger et. al 2018 5743382 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Top quality embryos	Health Effect: Reproductive/Developmental- Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer. Outcome measure: Top quality embryos were classified as those with 7–8 cells on day 3 (or in cases of day 2 transfer, 4 cells) and< 10% fragmentation.	Pregnant people. Adults (18+). Israel; Sheba Medical Center. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women undergoing in vitro fertilization (IVF) (n = 136) from January 2014 through August 2016 in Israel. 2014-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via spot urine sample; majority of women provided one spot urine samples during ovarian stimulation and/or during the day of oocyte retrieval..	Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.	Lowest exposure concentration for a significant adverse health outcome response: T2: 7.50-13.3 μg/L. MEOHP adjusted mean (95% CI): T2 vs T1 = 2.2 (1.8, 2.7) T3 vs T1 = 1.9 (1.5, 2.3), p-trend = 0.002.. MEOHP had significantly reduced numbers of top quality embryos reported for T2 and T3. No significant associations with MEOHP and live birth or implantation following assisted reproduction..	Machtinger et. al 2018 5743382 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Total oocytes	Health Effect: Reproductive/Developmental- Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer. Outcome measure: Embryologists classified oocytes as germinal vesicle, metaphase I, metaphase II (MII), or degenerated. In ICSI, oocyte maturation was assessed during fertilization check. Oocyte maturity in conventional IVF was assessed as follows after removal of the cumulus/corona radiata cells at the fertilization check. The total number of mature oocytes in a conventional IVF cycle was determined by summing the number of oocytes exhibiting one or more pronucleus combined with those without a pronucleus but exhibiting a polar body. Embryologists determined normal fertilization 16 to 18 hours after insemination or ICSI as the number of oocytes with two pronuclei.All clinical information was abstracted from medical records	Pregnant people. Adults (18+). Israel; Sheba Medical Center. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women undergoing in vitro fertilization (IVF) (n = 136) from January 2014 through August 2016 in Israel. 2014-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via spot urine sample; majority of women provided one spot urine samples during ovarian stimulation and/or during the day of oocyte retrieval..	Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.	Lowest exposure concentration for a significant adverse health outcome response: T2: 15.4-26.3 μg/L. MECPP adjusted mean (95% CI): T2 vs T1 = 9.4 (8.2, 10.3)T3 vs T1 = 8.5 (7.7, 9.3), p-trend: $<$0.001.. MECPP had significantly reduced numbers of total oocytes reported for T2 and T3. No significant associations with MECPP and fertilized oocytes, top quality embryos, live birth or implantation following assisted reproduction..	Machtinger et. al 2018 5743382 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Mature oocytes	Health Effect: Reproductive/Developmental- Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer. Outcome measure: Embryologists classified oocytes as germinal vesicle, metaphase I, metaphase II (MII), or degenerated. In ICSI, oocyte maturation was assessed during fertilization check. Oocyte maturity in conventional IVF was assessed as follows after removal of the cumulus/corona radiata cells at the fertilization check. The total number of mature oocytes in a conventional IVF cycle was determined by summing the number of oocytes exhibiting one or more pronucleus combined with those without a pronucleus but exhibiting a polar body. Embryologists determined normal fertilization 16 to 18 hours after insemination or ICSI as the number of oocytes with two pronuclei.All clinical information was abstracted from medical records	Pregnant people. Adults (18+). Israel; Sheba Medical Center. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women undergoing in vitro fertilization (IVF) (n = 136) from January 2014 through August 2016 in Israel. 2014-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via spot urine sample; majority of women provided one spot urine samples during ovarian stimulation and/or during the day of oocyte retrieval..	Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.	Lowest exposure concentration for a significant adverse health outcome response: T3: 26.4-371 μg/L. MECPP adjusted mean (95% CI): T3 vs T1 = 7.1 (6.4, 7.9), p-trend = 0.03.. MECPP had significantly reduced numbers of mature oocytes reported for T3. No significant associations with MECPP and fertilized oocytes, top quality embryos, live birth or implantation following assisted reproduction..	Machtinger et. al 2018 5743382 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Breast cancer	Health Effect: Cancer/Carcinogenesis-Breast cancer-Cancer-Reproductive/Developmental-Breast cancer-Cancer. Outcome measure: Cancer database and physician confirmation	Pregnant people. Adults (18+), Older Adults (65+). United States; Long Island, New York. Female. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Older adults (age >= 65 years). 1,308 adult females in Long Island, New York (n=710 cases, n=598 controls, cases followed-up for mortality data). Long Island Breast Cancer Study Project (LIBCSP). Enrollment: 1996-1997; Follow-up: Up to 12/31/2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at enrollment, post-diagnosis of breast cancer and pre-mortality.	Logistic Regression. Confounders adjusted for: Age, age at menarche, education, menopausal status, hormone replacement therapy use, body mass index, oral contraceptive use.	Lowest exposure concentration for a significant adverse health outcome response: 43.9-67.9 ug/g creatinine. OR (95% CI):Q2 vs. Q1: 0.70 (0.49, 1.00)Q3 vs. Q1: 0.85 (0.60, 1.20)Q4 vs. Q1: 0.65 (0.45, 0.93)Q5 vs. Q1: 0.79 (0.56, 1.13). A significant inverse association was reported for breast cancer and MnBP for the 4th quintile compared to the 1st quintile; significance was not maintained for other quartiles or when analyzed continuously..	Parada et. al 2018 4728408 Medium

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Diethylhexyl Phthalate

Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP); Mono-(2-ethyl-5-carboxypentyl)phthalate (MECPP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Breast cancer	Health Effect: Cancer/Carcinogenesis-Breast cancer-Cancer-Reproductive/Developmental-Breast cancer-Cancer. Outcome measure: Cancer database and physician confirmation	Pregnant people. Adults (18+), Older Adults (65+). United States; Long Island, New York. Female. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Older adults (age >= 65 years). 1,308 adult females in Long Island, New York (n=710 cases, n=598 controls, cases followed-up for mortality data). Long Island Breast Cancer Study Project (LIBCSP). Enrollment: 1996-1997; Follow-up: Up to 12/31/2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at enrollment, post-diagnosis of breast cancer and pre-mortality.	Logistic Regression. Confounders adjusted for: Age, age at menarche, education, menopausal status, hormone replacement therapy use, body mass index, oral contraceptive use.	Lowest exposure concentration for a significant adverse health outcome response: 3.79-6.16 ug/g creatinine. OR (95% CI):Q2 vs. Q1: 0.86 (0.60, 1.21)Q3 vs. Q1: 0.80 (0.56, 1.15)Q4 vs. Q1: 0.69 (0.48, 0.99)Q5 vs. Q1: 0.79 (0.55, 1.13). A significant inverse association was reported for breast cancer and MiBP for the 4th quintile compared to the 1st quintile; significance was not maintained for other quartiles or when analyzed continuously..	Parada et. al 2018 4728408 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Breast cancer	Health Effect: Cancer/Carcinogenesis-Breast cancer-Cancer-Reproductive/Developmental-Breast cancer-Cancer. Outcome measure: Cancer database and physician confirmation	Pregnant people. Adults (18+), Older Adults (65+). United States; Long Island, New York. Female. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Older adults (age >= 65 years). 1,308 adult females in Long Island, New York (n=710 cases, n=598 controls, cases followed-up for mortality data). Long Island Breast Cancer Study Project (LIBCSP). Enrollment: 1996-1997; Follow-up: Up to 12/31/2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at enrollment, post-diagnosis of breast cancer and pre-mortality.	Logistic Regression. Confounders adjusted for: Age, age at menarche, education, menopausal status, hormone replacement therapy use, body mass index, oral contraceptive use.	Lowest exposure concentration for a significant adverse health outcome response: 7.03-10.9 ug/g creatinine. OR (95% CI):Q2 vs. Q1: 0.64 (0.45, 0.91)Q3 vs. Q1: 0.81 (0.57, 1.14)Q4 vs. Q1: 0.59 (0.41, 0.84)Q5 vs. Q1: 0.72 (0.50, 1.03). A significant inverse association was reported for breast cancer and MBzP for the 2nd and 4th quintile compared to the 1st quintile; significance was not maintained for other quartiles or when analyzed continuously..	Parada et. al 2018 4728408 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Breast cancer	Health Effect: Cancer/Carcinogenesis-Breast cancer-Cancer-Reproductive/Developmental-Breast cancer-Cancer. Outcome measure: Cancer database and physician confirmation	Pregnant people. Adults (18+), Older Adults (65+). United States; Long Island, New York. Female. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Older adults (age >= 65 years). 1,308 adult females in Long Island, New York (n=710 cases, n=598 controls, cases followed-up for mortality data). Long Island Breast Cancer Study Project (LIBCSP). Enrollment: 1996-1997; Follow-up: Up to 12/31/2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at enrollment, post-diagnosis of breast cancer and pre-mortality.	Logistic Regression. Confounders adjusted for: Age, age at menarche, education, menopausal status, hormone replacement therapy use, body mass index, oral contraceptive use.	Lowest exposure concentration for a significant adverse health outcome response: MECCP: 34.0-45.9 ug/g creatinine. OR (95% CI) for MECCP:Q2 vs. Q1: 1.08 (0.76, 1.53)Q3 vs. Q1: 0.68 (0.47, 0.99)Q4 vs. Q1: 0.82 (0.57, 1.17)Q5 vs. Q1: 0.79 (0.55, 1.14). A significant inverse association was reported for breast cancer and MECCP for the 3rd quintile compared to the 1st quintile; significance was not maintained for other quartiles or when analyzed continuously. No other DEHP metabolites were statistically significant..	Parada et. al 2018 4728408 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Breast cancer	Health Effect: Reproductive/Developmental-Breast cancer mortality-Cancer-Mortality-Breast cancer mortality-Cancer-Cancer/Carcinogenesis-Breast cancer mortality-Cancer. Outcome measure: Cancer database and physician confirmation	Pregnant people. Adults (18+), Older Adults (65+). United States; Long Island, New York. Female. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Older adults (age >= 65 years). 1,308 adult females in Long Island, New York (n=710 cases, n=598 controls, cases followed-up for mortality data). Long Island Breast Cancer Study Project (LIBCSP). Enrollment: 1996-1997; Follow-up: Up to 12/31/2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at enrollment, post-diagnosis of breast cancer and pre-mortality.	Logistic Regression. Confounders adjusted for: Age, education, menopausal status, hormone replacement therapy use, body mass index, oral contraceptive use, receipt of hemotherapy treatment prior to urine sample collection.	Lowest exposure concentration for a significant adverse health outcome response: MEHP Q2 (no concentrations provided). OR (95% CI) for MEHP:Q2 vs. Q1: 0.51 (0.27, 0.96)Q3 vs. Q1: 0.65 (0.35, 1.18)Q4 vs. Q1: 0.47 (0.25, 0.89)Q5 vs. Q1: 0.54 (0.28, 1.04). A significant inverse association was reported for breast cancer mortality and MEHP in for the 2nd and 4th quintiles. No other significant associations were reported for DEHP metabolites..	Parada et. al 2018 4728408 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
autism spectrum-related behaviors	Health Effect: Neurological/Behavioral-Autism spectrum-related behaviors (Social Responsiveness Scale score)-Non-cancer. Outcome measure: Social Responsiveness Scale (SRS) scores	General public, Pregnant people. Preschool (3-5), Middle childhood (6-11), Adults (18+). United States; Cincinnati, Ohio. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Pregnant women recruited from nine prenatal clinics in the Cincinnati, Ohio area and their children (n=276). Health Outcomes and Measures of the Environment (HOME) cohort. Recruitment: during pregnancy 2003-2008; Follow-up: age 4-8.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Quantile regression. Confounders adjusted for: maternal age, maternal race, income, parity, serum cotinine.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) at different percentiles of the outcome distribution: 50th percentile: 2 (-1, 4); 75th percentile: -1 (-4, 4); 95th percentile: 14 (2, 23). At the 95th percentile of the outcome distribution, MiBP was associated with more deficits in social responsiveness traits in the HOME cohort..	Patti et. al 2021 8350115 High

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
autism spectrum-related behaviors	Health Effect: Neurological/Behavioral-Autism spectrum-related behaviors (Social Responsiveness Scale score)-Non-cancer. Outcome measure: Social Responsiveness Scale (SRS) scores	General public, Pregnant people. Preschool (3-5), Middle childhood (6-11), Adults (18+). United States; Cincinnati, Ohio. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Pregnant women recruited from nine prenatal clinics in the Cincinnati, Ohio area and their children (n=276). Health Outcomes and Measures of the Environment (HOME) cohort. Recruitment: during pregnancy 2003-2008; Follow-up: age 4-8.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Quantile regression. Confounders adjusted for: maternal age, maternal race, income, parity, serum cotinine.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) at different percentiles of the outcome distribution: 50th percentile: 1 (-3, 4); 75th percentile: 1 (-2, 5); 95th percentile: 10 (2, 14). At the 95th percentile of the outcome distribution, MBzP was associated with more deficits in social responsiveness traits in the HOME cohort..	Patti et. al 2021 8350115 High

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
autism spectrum-related behaviors	Health Effect: Neurological/Behavioral-Autism spectrum-related behaviors (Social Responsiveness Scale score)-Non-cancer. Outcome measure: Social Responsiveness Scale (SRS) scores	General public, Pregnant people. Preschool (3-5), Middle childhood (6-11), Adults (18+). United States; Cincinnati, Ohio. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Pregnant women recruited from nine prenatal clinics in the Cincinnati, Ohio area and their children (n=276). Health Outcomes and Measures of the Environment (HOME) cohort. Recruitment: during pregnancy 2003-2008; Follow-up: age 4-8.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Quantile regression. Confounders adjusted for: maternal age, maternal race, income, parity, serum cotinine.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) at different percentiles of the outcome distribution:50th percentile: 2 (-3, 3); 75th percentile: -2 (-5, 8); 95th percentile: 14 (1, 16). At the 95th percentile of the outcome distribution, MBP was associated with more deficits in social responsiveness traits in the HOME cohort..	Patti et. al 2021 8350115 High

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
autism spectrum-related behaviors	Health Effect: Neurological/Behavioral-Autism spectrum-related behaviors (Social Responsiveness Scale score)-Non-cancer. Outcome measure: Social Responsiveness Scale (SRS) scores	General public, Pregnant people. Preschool (3-5), Middle childhood (6-11), Adults (18+). United States; Cincinnati, Ohio. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Pregnant women recruited from nine prenatal clinics in the Cincinnati, Ohio area and their children (n=276). Health Outcomes and Measures of the Environment (HOME) cohort. Recruitment: during pregnancy 2003-2008; Follow-up: age 4-8.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Quantile regression. Confounders adjusted for: maternal age, maternal race, income, parity, serum cotinine.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) at different percentiles of the outcome distribution:50th percentile: 5 (2, 7); 75th percentile: 4 (-1, 7); 95th percentile: 9 (-1, 17). At the 50th percentile of the outcome distribution, MBP was associated with more deficits in social responsiveness traits in the HOME cohort. Associations at the 75th and 95th percentiles positive but not significant..	Patti et. al 2021 8350115 High

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
autism spectrum disorder-related behaviors	Health Effect: Neurological/Behavioral-Autism spectrum-related behaviors (Social Responsiveness Scale score)-Non-cancer. Outcome measure: Social Responsiveness Scales (SRS) scores	General public, Pregnant people. Preschool (3-5), Middle childhood (6-11), Adults (18+). United States; Pennsylvania, Maryland, California, United States. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Pregnant women who previously had a child diagnosed with autism spectrum disorder and their children (n=140). Early Autism Risk Longitudinal Investigation (EARLI) cohort. Recruitment: during pregnancy 2009-2012; Follow-up: age 3.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Quantile regression. Confounders adjusted for: maternal age, maternal race, income, parity, urine cotinine.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) at different percentiles of the outcome distribution:50th percentile: -5 (-9, -1); 75th percentile: -7 (-11, 5); 95th percentile: -12 (-15, 6). At the 50th percentile of the outcome distribution, MBP was associated with fewer deficits in social responsiveness traits in the EARLI cohort. Associations at the 75th and 95th percentiles were inverse but not statistically significant..	Patti et. al 2021 8350115 High

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
autism spectrum disorder-related behaviors	Health Effect: Neurological/Behavioral-Autism spectrum-related behaviors (Social Responsiveness Scale score)-Non-cancer. Outcome measure: Social Responsiveness Scales (SRS) scores	General public, Pregnant people. Preschool (3-5), Middle childhood (6-11), Adults (18+). United States; Pennsylvania, Maryland, California, United States. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Pregnant women who previously had a child diagnosed with autism spectrum disorder and their children (n=140). Early Autism Risk Longitudinal Investigation (EARLI) cohort. Recruitment: during pregnancy 2009-2012; Follow-up: age 3.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Quantile regression. Confounders adjusted for: maternal age, maternal race, income, parity, urine cotinine.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) at different percentiles of the outcome distribution:50th percentile: -5 (-7, -1); 75th percentile: -6 (-11, -2); 95th percentile: -15 (-23, 9). At the 50th and 75th percentiles of the outcome distribution, MBP was associated with fewer deficits in social responsiveness traits in the EARLI cohort. Association at the 95th percentile was inverse but not statistically significant..	Patti et. al 2021 8350115 High

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Autism spectrum disorder (ASD)	Health Effect: Neurological/Behavioral- Doctor-diagnosed autism spectrum disorder (ASD)- Non-cancer. Outcome measure: Physician diagnosis	General public, Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Australia; Barwon Statistical Division. Female, Male. Cohort (Prospective). PESS: Lifestage , Genetics/Epigenetics (ex. genetic variants that increase susceptibility; knockout animals). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-infant pairs recruited in the Barwon Statistical Division, Australia (n=1,074 recruited, n=678 with outcome data at age 2, n=791 with outcome data at age 4). Recruitment: 2010-2013; Follow-up: through child age 4.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Logistic Regression. Confounders adjusted for: age at interview, sex.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for a doubling of estimated DEHP intake: 1.55 (1.06, 2.28). There was a statistically significant positive association between estimated DEHP intake and ASD. Results remained significant when adjusted for additional potential confounding variables..	Ponsonby et. al 2020 9644527 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Autism spectrum disorder (ASD) traits	Health Effect: Neurological/Behavioral-Autism spectrum disorder (ASD) traits-Non-cancer. Outcome measure: Parental report	General public, Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Australia; Barwon Statistical Division. Female, Male. Cohort (Prospective). PESS: Lifestage , Genetics/Epigenetics (ex. genetic variants that increase susceptibility; knockout animals). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-infant pairs recruited in the Barwon Statistical Division, Australia (n=1,074 recruited, n=678 with outcome data at age 2, n=791 with outcome data at age 4). Recruitment: 2010-2013; Follow-up: through child age 4.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Logistic Regression. Confounders adjusted for: age at interview, sex.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for a doubling of estimated DEHP intake: 1.51 (1.15, 1.98).. There was a statistically significant positive association between estimated DEHP intake and ASD traits. Results remained significant when adjusted for additional potential confounding variables..	Ponsonby et. al 2020 9644527 Medium

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Diethylhexyl Phthalate

Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP); Mono-(2-ethyl-5-carboxypentyl)phthalate (MECPP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Autism spectrum disorder (ASD)	Health Effect: Neurological/Behavioral- Doctor-diagnosed autism spectrum disorder (ASD)- Non-cancer. Outcome measure: Physician diagnosis	General public, Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Australia; Barwon Statistical Division. Female, Male. Cohort (Prospective). PESS: Lifestage , Genetics/Epigenetics (ex. genetic variants that increase susceptibility; knockout animals). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-infant pairs recruited in the Barwon Statistical Division, Australia (n=1,074 recruited, n=678 with outcome data at age 2, n=791 with outcome data at age 4). Recruitment: 2010-2013; Follow-up: through child age 4.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Logistic Regression. Confounders adjusted for: age at interview, sex.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for a doubling of estimated ”dibutyl phthalates” intake: 1.89 (1.01, 3.53). There was a statistically significant positive association between estimated ”dibutyl phthalates” intake (including both MnBP and MiBP) and ASD. Results remained significant when adjusted for additional potential confounding variables..	Ponsonby et. al 2020 9644527 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Autism spectrum disorder (ASD)	Health Effect: Neurological/Behavioral- Doctor-diagnosed autism spectrum disorder (ASD)- Non-cancer. Outcome measure: Physician diagnosis	General public, Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Australia; Barwon Statistical Division. Female, Male. Cohort (Prospective). PESS: Lifestage , Genetics/Epigenetics (ex. genetic variants that increase susceptibility; knockout animals). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-infant pairs recruited in the Barwon Statistical Division, Australia (n=1,074 recruited, n=678 with outcome data at age 2, n=791 with outcome data at age 4). Recruitment: 2010-2013; Follow-up: through child age 4.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Logistic Regression. Confounders adjusted for: age at interview, sex.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for a doubling of estimated ”dibutyl phthalates” intake: 1.89 (1.01, 3.53). Significant positive association between estimated ”dibutyl phthalates” intake (including both MnBP and MiBP) and ASD. Results remained significant when adjusted for additional potential confounding variables..	Ponsonby et. al 2020 9644527 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Autism spectrum disorder (ASD) traits	Health Effect: Neurological/Behavioral-Autism spectrum disorder (ASD) traits-Non-cancer. Outcome measure: Parental report	General public, Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Australia; Barwon Statistical Division. Female, Male. Cohort (Prospective). PESS: Lifestage , Genetics/Epigenetics (ex. genetic variants that increase susceptibility; knockout animals). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-infant pairs recruited in the Barwon Statistical Division, Australia (n=1,074 recruited, n=678 with outcome data at age 2, n=791 with outcome data at age 4). Recruitment: 2010-2013; Follow-up: through child age 4.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Logistic Regression. Confounders adjusted for: age at interview, sex.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for a doubling of estimated ”dibutyl phthalates” intake: 1.44 (1.03, 2.03). There was a statistically significant positive association between estimated ”dibutyl phthalates” intake (including both MnBP and MiBP) and ASD traits. Results remained significant when adjusted for additional potential confounding variables..	Ponsonby et. al 2020 9644527 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Autism spectrum disorder (ASD) traits	Health Effect: Neurological/Behavioral-Autism spectrum disorder (ASD) traits-Non-cancer. Outcome measure: Parental report	General public, Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Australia; Barwon Statistical Division. Female, Male. Cohort (Prospective). PESS: Lifestage , Genetics/Epigenetics (ex. genetic variants that increase susceptibility; knockout animals). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-infant pairs recruited in the Barwon Statistical Division, Australia (n=1,074 recruited, n=678 with outcome data at age 2, n=791 with outcome data at age 4). Recruitment: 2010-2013; Follow-up: through child age 4.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Logistic Regression. Confounders adjusted for: age at interview, sex.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for a doubling of estimated ”dibutyl phthalates” intake: 1.44 (1.03, 2.03). There was a statistically significant positive association between estimated ”dibutyl phthalates” intake (including both MnBP and MiBP) and ASD traits. Results remained significant when adjusted for additional potential confounding variables..	Ponsonby et. al 2020 9644527 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Hyperactivity/inattention	Health Effect: Neurological/Behavioral-Attention deficit hyperactivity disorder (ADHD) diagnosis, or hyperactivity symptoms on the hyperactivity/inattention scale of the pre-school version of the Strengths and Difficulties Questionnaire-Non-cancer. Outcome measure: Strengths and Difficulties (SDQ) Scale	General public, Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Australia; Victoria, Australia. Female, Male. Cohort (Prospective). PESS: Lifestage , Genetics/Epigenetics (ex. genetic variants that increase susceptibility; knockout animals). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-infant pairs recruited in the Barwon Statistical Division, Australia (n=1,074 recruited, n=678 with outcome data at age 2, n=791 with outcome data at age 4). Recruitment: 2010-2013: Follow-up: through child age 4.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Linear Regression. Confounders adjusted for: age, sex.	Lowest exposure concentration for a significant adverse health outcome response: continuous. p-value for test of trend = 0.008. Statistically significant associations were reported for dibutyl phthalate (DBP)..	Ponsonby et. al 2020 9644527 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
psychomotor development index	Health Effect: Neurological/Behavioral-Bayley Scales of Infant Development of China Revision (mental development index, psychomotor development index)-Non-cancer. Outcome measure: Clinical evaluation	Patients in clinics, Pregnant people. Infant (0-1), Toddler (2-3), Adults (18+). China; Wuhan, Hubei Province. Female, Male. Cohort (Prospective). PESS: Lifestage , Aggregate Exposures (ex. multiple air exposure sources), Other PESS category specified in the reference. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Mother-child pairs in Hubei Province receiving antenatal examination at Wuhan Medical & Healthcare Center for Women and Children (Enrolled n = 856; Follow-up n = 478; Used in analysis n = 476). Recruitment: 2014-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Generalized linear model. Confounders adjusted for: child's sex, maternal age, maternal education, pre-pregnancy BMI, gestational weight gain, smoking status, folic acid supplementation during pregnancy, parity, breastfeeding status.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) per Ln-unit increase: -1.90 (-3.43, -0.37). Negative association reported in sex-stratified analyses but not significant. Exclusion of premature and LBW children did not change the findings..	Qian et. al 2019 6967437 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
psychomotor development index	Health Effect: Neurological/Behavioral-Bayley Scales of Infant Development of China Revision (mental development index, psychomotor development index)-Non-cancer. Outcome measure: Clinical evaluation	Patients in clinics, Pregnant people. Infant (0-1), Toddler (2-3), Adults (18+). China; Wuhan, Hubei Province. Female, Male. Cohort (Prospective). PESS: Lifestage , Aggregate Exposures (ex. multiple air exposure sources), Other PESS category specified in the reference. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Mother-child pairs in Hubei Province receiving antenatal examination at Wuhan Medical & Healthcare Center for Women and Children (Enrolled n = 856; Follow-up n = 478; Used in analysis n = 476). Recruitment: 2014-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Generalized linear model. Confounders adjusted for: child's sex, maternal age, maternal education, pre-pregnancy BMI, gestational weight gain, smoking status, folic acid supplementation during pregnancy, parity, breastfeeding status.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) per Ln-unit increase MECPP: 2.15 (0.01, 4.29). Non-significant positive associations reported per ln-unit increase in MEHP, MEOHP, and MEHHP across the whole study population..	Qian et. al 2019 6967437 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
psychomotor development index	Health Effect: Neurological/Behavioral-Bayley Scales of Infant Development of China Revision (mental development index, psychomotor development index)-Non-cancer. Outcome measure: Clinical evaluation	Patients in clinics, Pregnant people. Infant (0-1), Toddler (2-3), Adults (18+). China; Wuhan, Hubei Province. Female, Male. Cohort (Prospective). PESS: Lifestage , Aggregate Exposures (ex. multiple air exposure sources), Other PESS category specified in the reference. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Mother-child pairs in Hubei Province receiving antenatal examination at Wuhan Medical & Healthcare Center for Women and Children (Enrolled n = 856; Follow-up n = 478; Used in analysis n = 476). Recruitment: 2014-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Generalized linear model. Confounders adjusted for: child's sex, maternal age, maternal education, pre-pregnancy BMI, gestational weight gain, smoking status, folic acid supplementation during pregnancy, parity, breastfeeding status.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) per Ln-unit increase MEHP among boys: 2.25 (0.54, 3.96). No association reported with MEHP exposure among girls..	Qian et. al 2019 6967437 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
psychomotor development index	Health Effect: Neurological/Behavioral-Bayley Scales of Infant Development of China Revision (mental development index, psychomotor development index)-Non-cancer. Outcome measure: Clinical evaluation	Patients in clinics, Pregnant people. Infant (0-1), Toddler (2-3), Adults (18+). China; Wuhan, Hubei Province. Female, Male. Cohort (Prospective). PESS: Lifestage , Aggregate Exposures (ex. multiple air exposure sources), Other PESS category specified in the reference. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Mother-child pairs in Hubei Province receiving antenatal examination at Wuhan Medical & Healthcare Center for Women and Children (Enrolled n = 856; Follow-up n = 478; Used in analysis n = 476). Recruitment: 2014-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Generalized linear model. Confounders adjusted for: child's sex, maternal age, maternal education, pre-pregnancy BMI, gestational weight gain, smoking status, folic acid supplementation during pregnancy, parity, breast-feeding status.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) per Ln-unit increase MEOHP among boys: 2.55 (0.05, 5.06). Non-significant negative association reported with MEOHP exposure among girls..	Qian et. al 2019 6967437 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
psychomotor development index	Health Effect: Neurological/Behavioral-Bayley Scales of Infant Development of China Revision (mental development index, psychomotor development index)-Non-cancer. Outcome measure: Clinical evaluation	Patients in clinics, Pregnant people. Infant (0-1), Toddler (2-3), Adults (18+). China; Wuhan, Hubei Province. Female, Male. Cohort (Prospective). PESS: Lifestage , Aggregate Exposures (ex. multiple air exposure sources), Other PESS category specified in the reference. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Mother-child pairs in Hubei Province receiving antenatal examination at Wuhan Medical & Healthcare Center for Women and Children (Enrolled n = 856; Follow-up n = 478; Used in analysis n = 476). Recruitment: 2014-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Generalized linear model. Confounders adjusted for: child's sex, maternal age, maternal education, pre-pregnancy BMI, gestational weight gain, smoking status, folic acid supplementation during pregnancy, parity, breastfeeding status.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) per Ln-unit increase MECPP among boys: 3.49 (0.88, 6.10). No association reported with MECPP exposure among girls..	Qian et. al 2019 6967437 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
psychomotor development index	Health Effect: Neurological/Behavioral-Bayley Scales of Infant Development of China Revision (mental development index, psychomotor development index)-Non-cancer. Outcome measure: Clinical evaluation	Patients in clinics, Pregnant people. Infant (0-1), Toddler (2-3), Adults (18+). China; Wuhan, Hubei Province. Female, Male. Cohort (Prospective). PESS: Lifestage , Aggregate Exposures (ex. multiple air exposure sources), Other PESS category specified in the reference. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Mother-child pairs in Hubei Province receiving antenatal examination at Wuhan Medical & Healthcare Center for Women and Children (Enrolled n = 856; Follow-up n = 478; Used in analysis n = 476). Recruitment: 2014-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Generalized linear model. Confounders adjusted for: child's sex, maternal age, maternal education, pre-pregnancy BMI, gestational weight gain, smoking status, folic acid supplementation during pregnancy, parity, breast-feeding status.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) per Ln-unit increase sumDEHP among boys: 3.24 (0.70, 5.78).. Non-significant negative association reported with sumDEHP exposure among girls..	Qian et. al 2019 6967437 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
psychomotor development index	Health Effect: Neurological/Behavioral-Bayley Scales of Infant Development of China Revision (mental development index, psychomotor development index)-Non-cancer. Outcome measure: Clinical evaluation	Patients in clinics, Pregnant people. Infant (0-1), Toddler (2-3), Adults (18+). China; Wuhan, Hubei Province. Female, Male. Cohort (Prospective). PESS: Lifestage , Aggregate Exposures (ex. multiple air exposure sources), Other PESS category specified in the reference. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Mother-child pairs in Hubei Province receiving antenatal examination at Wuhan Medical & Healthcare Center for Women and Children (Enrolled n = 856; Follow-up n = 478; Used in analysis n = 476). Recruitment: 2014-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Generalized linear model. Confounders adjusted for: child's sex, maternal age, maternal education, pre-pregnancy BMI, gestational weight gain, smoking status, folic acid supplementation during pregnancy, parity, breastfeeding status.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) per Ln-unit increase DnBP using cumulative risk assessment: -1.88 (-3.40, -0.36). Non-significant negative associations reported among boys and girls..	Qian et. al 2019 6967437 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
psychomotor development index	Health Effect: Neurological/Behavioral-Bayley Scales of Infant Development of China Revision (mental development index, psychomotor development index)-Non-cancer. Outcome measure: Clinical evaluation	Patients in clinics, Pregnant people. Infant (0-1), Toddler (2-3), Adults (18+). China; Wuhan, Hubei Province. Female, Male. Cohort (Prospective). PESS: Lifestage , Aggregate Exposures (ex. multiple air exposure sources), Other PESS category specified in the reference. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Mother-child pairs in Hubei Province receiving antenatal examination at Wuhan Medical & Healthcare Center for Women and Children (Enrolled n = 856; Follow-up n = 478; Used in analysis n = 476). Recruitment: 2014-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Generalized linear model. Confounders adjusted for: child's sex, maternal age, maternal education, pre-pregnancy BMI, gestational weight gain, smoking status, folic acid supplementation during pregnancy, parity, breast-feeding status.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) per Ln-unit increase sumDEHP using cumulative risk assessment: 3.14 (0.62, 5.66). Non-significant positive association reported for the total study population, and a non-significant negative association reported among girls..	Qian et. al 2019 6967437 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Incident primary invasive breast cancer	Health Effect: Cancer/Carcinogenesis-Breast cancer-Cancer-Reproductive/Developmental-Breast cancer-Cancer. Outcome measure: Self-reported with medical records adjudication	General public. Adults (18+), Older Adults (65+). United States. Female. Nested Case-Control. PESS: Lifestage . Lifestage PESS: Older adults (age >= 65 years). 1,257 postmenopausal women (n=419 cases, 838 controls). Women's Health Initiative. Recruitment: 1993-1993; Follow-up: 2013.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via biomonitoring (2-3 spot urines) within ~3 years of recruitment.	Logistic Regression. Confounders adjusted for: age, race/region, neighborhood socioeconomic status index, body mass index, alcohol use, smoking status, Gail risk score, postmenopausal hormone therapy use at enrollment, hormone therapy trial assignment, dietary modification trial assignment.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. OR (95% CI) per ln-unit increase in DBP metabolites ln-MHBP: ER-PR- cases = 2.07 (1.05 - 4.08)*; ER+/PR+ cases = 0.98 (0.84 - 1.15) ln-MBP: ER-PR- cases = 1.67 (0.96 - 2.89); ER+/PR+ cases = 1.14 (0.97 - 1.35) ln-sumDBP: ER-PR- cases = 1.71 (0.97 - 3.00); ER+/PR+ cases = 1.12 (0.96 - 1.31). Significant positive association with MHBP for ER-/PR- breast cancer cases, null association for ER+/PR+ cases. Positive but marginally non-significant association for ER-/PR- breast cancer cases and MBP and the sum of both DBP metabolites. Associations using quartiles of exposure were largely non-significant..	Reeves et. al 2019 5043615 Medium
Incident primary invasive breast cancer	Health Effect: Cancer/Carcinogenesis-Breast cancer-Cancer-Reproductive/Developmental-Breast cancer-Cancer. Outcome measure: Self-reported with medical records adjudication	General public. Adults (18+), Older Adults (65+). United States. Female. Nested Case-Control. PESS: Lifestage . Lifestage PESS: Older adults (age >= 65 years). 1,257 postmenopausal women (n=419 cases, 838 controls). Women's Health Initiative. Recruitment: 1993-1993; Follow-up: 2013.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via biomonitoring (2-3 spot urines) within ~3 years of recruitment.	Logistic Regression. Confounders adjusted for: age, race/region, neighborhood socioeconomic status index, body mass index, alcohol use, smoking status, Gail risk score, postmenopausal hormone therapy use at enrollment, hormone therapy trial assignment, dietary modification trial assignment.	Lowest exposure concentration for a significant adverse health outcome response: Q4: 2.02 - 121.78 ug/g creatinine. OR (95% CI) for quartiles of MHiBP and ER-/PR- breast cancer: Q2 vs. Q1: 0.88 (0.18 - 4.25) Q3 vs. Q1: 0.54 (0.14 - 2.06) Q4 vs. Q1: 0.19 (0.04 - 0.97)* For ER-PR- breast cancer, OR (95% CI) per ln-MHiBP: 0.59 (0.34 - 1.04) OR (95% CI) for quartiles of MHiBP and ER+/PR+ breast cancer: Q2 vs. Q1: 0.82 (0.52 - 1.29) Q3 vs. Q1: 0.68 (0.43 - 1.08) Q4 vs. Q1: 0.71 (0.45 - 1.13) For ER-PR- breast cancer, OR (95% CI) per ln-MHiBP: 0.93 (0.75 - 1.16). The highest quartile of MHiBP was associated with a significantly reduced risk of breast cancer among ER-/PR- cases, but not among ER+/PR+ cases. Associations were not significant for MiBP or the sum of both DiBP metabolites..	Reeves et. al 2019 5043615 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Incident primary invasive breast cancer	Health Effect: Cancer/Carcinogenesis-Breast cancer-Cancer-Reproductive/Developmental-Breast cancer-Cancer. Outcome measure: Self-reported with medical records adjudication	General public. Adults (18+), Older Adults (65+). United States. Female. Nested Case-Control. PESS: Lifestage . Lifestage PESS: Older adults (age >= 65 years). 1,257 postmenopausal women (n=419 cases, 838 controls). Women's Health Initiative (WHI). 1993-1998.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via biomonitoring (2-3 spot urines) within ~3 years of recruitment.	Logistic Regression. Confounders adjusted for: age, race/region, neighborhood socioeconomic status index, body mass index, alcohol use, smoking status, Gail risk score, postmenopausal hormone therapy use at enrollment, hormone therapy trial assignment, dietary modification trial assignment.	Lowest exposure concentration for a significant adverse health outcome response: 18.03-27.42 ug/g creatinine. OR (95% CI) for Q3 v Q1 MBzP: For all cases: 0.57 (0.39-0.84) For ER-/PR- cancers: 0.23 (0.05 to 0.97) For ER+/PR+ cancers: 0.65 (0.41 to 1.03). Significant inverse association between the third quartile of MBzP and breast cancer risk overall, and for ER-/PR- cancers. An inverse association with ER+/PR+ tumors was marginally non-significant. Associations were not significant using continuous exposure, or with other MBzP quantiles..	Reeves et. al 2019 5043615 Medium
ER+/PR+ breast cancer risk	Health Effect: Cancer/Carcinogenesis-Breast cancer-Cancer-Reproductive/Developmental-Breast cancer-Cancer. Outcome measure: Self-reported with medical records adjudication	General public. Adults (18+), Older Adults (65+). United States. Female. Nested Case-Control. PESS: Lifestage . Lifestage PESS: Older adults (age >= 65 years). 1,257 postmenopausal women (n=419 cases, 838 controls). Women's Health Initiative (WHI). 1993-1998.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via biomonitoring (2-3 spot urines) within ~3 years of recruitment.	Logistic Regression. Confounders adjusted for: age, race/region, neighborhood socioeconomic status index, body mass index, alcohol use, smoking status, Gail risk score, postmenopausal hormone therapy use at enrollment, hormone therapy trial assignment, dietary modification trial assignment.	Lowest exposure concentration for a significant adverse health outcome response: 27.69-43.35 ug/g creatinine. OR (95% CI) for Q3 v Q1 MEHHP: For all cases: 0.85 (0.58 - 1.24) For ER-PR- cancers: 1.97 (0.47 - 8.32) For ER+/PR+ cancers: 0.58 (0.36-0.94)*. Significant inverse association between the third quartile of MEHHP and ER+/PR+ breast cancer risk. Associations were not significant overall, with ER-/PR- tumors, using continuous exposure, or with other MEHHP quantiles..	Reeves et. al 2019 5043615 Medium
ER+/PR+ breast cancer risk	Health Effect: Cancer/Carcinogenesis-Breast cancer-Cancer-Reproductive/Developmental-Breast cancer-Cancer. Outcome measure: Self-reported with medical records adjudication	General public. Adults (18+), Older Adults (65+). United States. Female. Nested Case-Control. PESS: Lifestage . Lifestage PESS: Older adults (age >= 65 years). 1,257 postmenopausal women (n=419 cases, 838 controls). Women's Health Initiative (WHI). 1993-1998.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via biomonitoring (2-3 spot urines) within ~3 years of recruitment.	Logistic Regression. Confounders adjusted for: age, race/region, neighborhood socioeconomic status index, body mass index, alcohol use, smoking status, Gail risk score, postmenopausal hormone therapy use at enrollment, hormone therapy trial assignment, dietary modification trial assignment.	Lowest exposure concentration for a significant adverse health outcome response: 17.19-26.53 ug/g creatinine. OR (95% CI) for Q3 v Q1 MEOHP: For all cases: 0.70 (0.47 - 1.03) For ER-PR- cancers: 0.90 (0.21 - 3.77) For ER+/PR+ cancers: 0.58 (0.36-0.94)*. Significant inverse association between the third quartile of MEOHP and ER+/PR+ breast cancer risk. Associations were not significant overall, with ER-/PR- tumors, using continuous exposure, or with other MEOHP quantiles..	Reeves et. al 2019 5043615 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Change in weight after pregnancy	Health Effect: Nutritional/Metabolic-Weight change after pregnancy-Non-cancer-Reproductive/Developmental-Weight change after pregnancy-Non-cancer. Outcome measure: Measured during clinical follow-up visits	General public, Pregnant people. Adults (18+). Mexico. Female. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Mexican women from a subsample of the ELEMENT cohort recruited during pregnancy (n = 178). ELEMENT cohort. Recruitement: 1997-2004; Follow-up: 1998-2005 and 2008-2011.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Linear mixed model. Confounders adjusted for: age, education, parity rate, energy intake, marital status.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI): -0.21 (-0.38, -0.03). Significant negative associations for MBzP from main model. Significant negative associations also reported in models including all 9 metabolites..	Rodríguez-Carmona et. al 2019 5043451 Medium
Change in weight after pregnancy	Health Effect: Nutritional/Metabolic-Weight change after pregnancy-Non-cancer-Reproductive/Developmental-Weight change after pregnancy-Non-cancer. Outcome measure: Measured during clinical follow-up visits	General public, Pregnant people. Adults (18+). Mexico. Female. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Mexican women from a subsample of the ELEMENT cohort recruited during pregnancy (n = 178). ELEMENT cohort. Recruitement: 1997-2004; Follow-up: 1998-2005 and 2008-2011.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Linear mixed model. Confounders adjusted for: age, education, parity rate, energy intake, marital status.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI): 0.19 (0.03, 0.35). Significant positive associations for MiBP in models including all 9 metabolites..	Rodríguez-Carmona et. al 2019 5043451 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Overweight patients	Health Effect: Nutritional/Metabolic-Weight change-Non-cancer-Nutritional/Metabolic-Overweight and obesity-Non-cancer. Outcome measure: Height and weight measured at baseline, year 3, and year 6 clinic visits and used to determine BMI	Patients in clinics. Adults (18+), Older Adults (65+). United States. Female. Nested Case-Control. PESS: . Postmenopausal women from clinics throughout the United States (enrolled n=1257; used in analysis n=997). Women's Health Initiative. 1993-1998, follow-up: through 2013.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured at clinic visits.	Logistic Regression. Confounders adjusted for: creatinine, age, ethnicity, alcohol use, physical activity, smoking status, healthy eating index, dietary energy intake, hormone replacement therapy use, education, income, history of diabetes, hypertension, dyslipidemia, cardiovascular diseases.	Lowest exposure concentration for a significant adverse health outcome response: 5.50-108.00 ng/mL. MCPP OR (95% CI) for Q4 vs. Q1: 1.90 (1.10-3.27). Significant positive association reported for Q4 vs. Q1, other quartiles were not significant. P-value for trend reported as 0.02.	Santana et. al 2019 5613207 Medium
Obese patients	Health Effect: Nutritional/Metabolic-Weight change-Non-cancer-Nutritional/Metabolic-Overweight and obesity-Non-cancer. Outcome measure: Height and weight measured at baseline, year 3, and year 6 clinic visits and used to determine BMI	Patients in clinics. Adults (18+), Older Adults (65+). United States. Female. Nested Case-Control. PESS: . Postmenopausal women from clinics throughout the United States (enrolled n=1257; used in analysis n=997). Women's Health Initiative. 1993-1998, follow-up: through 2013.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured at clinic visits.	Logistic Regression. Confounders adjusted for: creatinine, age, ethnicity, alcohol use, physical activity, smoking status, healthy eating index, dietary energy intake, hormone replacement therapy use, education, income, history of diabetes, hypertension, dyslipidemia, cardiovascular diseases.	Lowest exposure concentration for a significant adverse health outcome response: 3.10-5.40 ng/mL. MCPP OR (95% CI) for Q3 vs. Q1: 1.86 (1.10-3.16). Significant positive association reported for Q3 vs. Q1, other quartiles were not significant. P-value for trend reported as 0.02.	Santana et. al 2019 5613207 Medium
Estimated additional weight change associated with phthalate biomarker concentration at years 3 and 6	Health Effect: Nutritional/Metabolic-Weight change-Non-cancer-Nutritional/Metabolic-Overweight and obesity-Non-cancer. Outcome measure: Height and weight measured at baseline, year 3, and year 6 clinic visits and used to determine BMI	Patients in clinics. Adults (18+), Older Adults (65+). United States. Female. Nested Case-Control. PESS: . Postmenopausal women from clinics throughout the United States (enrolled n=1257; used in analysis n=660 controls). Women's Health Initiative. 1993-1998, follow-up: through 2013.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured at clinic visits.	Mixed effects models. Confounders adjusted for: creatinine, age, ethnicity, alcohol use, physical activity, smoking status, healthy eating index, dietary energy intake, hormone replacement therapy use, education, income, history of diabetes, hypertension, dyslipidemia, cardiovascular diseases.	Lowest exposure concentration for a significant adverse health outcome response: MCPP: 3.10-5.40 ng/mL; MBP: 12.10-23.60 ng/mL. MCPP Beta (95% CI) for Q3 vs. Q1: -0.65 (-2.07-0.77)MBP Beta for Q2 vs. Q1: -0.52 (-1.98-0.95). Significant negative association reported for Q2 vs. Q1 of MBP and for Q3 vs. Q1 of MCPP.	Santana et. al 2019 5613207 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Estimated additional weight change associated with phthalate biomarker concentration at years 3 and 6	Health Effect: Nutritional/Metabolic-Weight change-Non-cancer-Nutritional/Metabolic-Overweight and obesity-Non-cancer. Outcome measure: Height and weight measured at baseline, year 3, and year 6 clinic visits and used to determine BMI	Patients in clinics. Adults (18+), Older Adults (65+). United States. Female. Nested Case-Control. PESS: . Postmenopausal women from clinics throughout the United States (enrolled n=1257; used in analysis n=660 controls). Women's Health Initiative. 1993-1998, follow-up: through 2013.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured at clinic visits.	Mixed effects models. Confounders adjusted for: creatinine, age, ethnicity, alcohol use, physical activity, smoking status, healthy eating index, dietary energy intake, hormone replacement therapy use, education, income, history of diabetes, hypertension, dyslipidemia, cardiovascular diseases.	Lowest exposure concentration for a significant adverse health outcome response: 12.10-22.20 ng/mL. Year 3 Beta (95% CI) for Q3 vs. Q1: -0.44 (-1.87-0.98). Significant negative association reported for Q3 vs. Q1 of MBzP in year 3. No significant associations noted for year 6.	Santana et. al 2019 5613207 Medium
Overweight and obese patients	Health Effect: Nutritional/Metabolic-Weight change-Non-cancer-Nutritional/Metabolic-Overweight and obesity-Non-cancer. Outcome measure: Height and weight measured at baseline, year 3, and year 6 clinic visits and used to determine BMI	Patients in clinics. Adults (18+), Older Adults (65+). United States. Female. Nested Case-Control. PESS: . Postmenopausal women from clinics throughout the United States (enrolled n=1257; used in analysis n=997). Women's Health Initiative. 1993-1998, follow-up: through 2013.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured at clinic visits.	Logistic Regression. Confounders adjusted for: creatinine, age, ethnicity, alcohol use, physical activity, smoking status, healthy eating index, dietary energy intake, hormone replacement therapy use, education, income, history of diabetes, hypertension, dyslipidemia, cardiovascular diseases.	Lowest exposure concentration for a significant adverse health outcome response: 6.00-12.00 ng/mL. Obese OR (95% CI) for Q2 vs. Q1: 2.58 (1.52-4.38)Q4 vs. Q1: 2.73 (1.48-5.04). Significant positive association for Q2 and Q4 vs. Q1 of MBzP concentrations.	Santana et. al 2019 5613207 Medium
Overweight and obese patients	Health Effect: Nutritional/Metabolic-Weight change-Non-cancer-Nutritional/Metabolic-Overweight and obesity-Non-cancer. Outcome measure: Height and weight measured at baseline, year 3, and year 6 clinic visits and used to determine BMI	Patients in clinics. Adults (18+), Older Adults (65+). United States. Female. Nested Case-Control. PESS: . Postmenopausal women from clinics throughout the United States (enrolled n=1257; used in analysis n=997). Women's Health Initiative. 1993-1998, follow-up: through 2013.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured at clinic visits.	Logistic Regression. Confounders adjusted for: creatinine, age, ethnicity, alcohol use, physical activity, smoking status, healthy eating index, dietary energy intake, hormone replacement therapy use, education, income, history of diabetes, hypertension, dyslipidemia, cardiovascular diseases.	Lowest exposure concentration for a significant adverse health outcome response: MiBP: 2.20-4.10; 4.20-212.00 ng/mL. Overweight OR (95% CI) for Q3 vs. Q1: 1.73 (1.08-2.76); Q4 vs. Q1: 2.27 (1.35-3.81)Obese OR (95% CI) for Q3 vs. Q1: 1.97 (1.17-3.31); Q4 vs. Q1: 2.30 (1.28-4.13). Significant positive associations for Q3 and Q4 vs. Q1 for MiBP and overweight patients. Significant positive associations for Q3 and Q4 vs. for MiBP concentrations and obese patients..	Santana et. al 2019 5613207 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Estimated additional weight change associated with phthalate biomarker concentrations	Health Effect: Nutritional/Metabolic-Weight change-Non-cancer-Nutritional/Metabolic-Overweight and obesity-Non-cancer. Outcome measure: Height and weight measured at baseline, year 3, and year 6 clinic visits and used to determine BMI	Patients in clinics. Adults (18+), Older Adults (65+). United States. Female. Nested Case-Control. PESS: . Postmenopausal women from clinics throughout the United States (enrolled n=1257; used in analysis n=660 controls). Women's Health Initiative. 1993-1998, follow-up: through 2013.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured at clinic visits.	Mixed effects models. Confounders adjusted for: creatinine, age, ethnicity, alcohol use, physical activity, smoking status, healthy eating index, dietary energy intake, hormone replacement therapy use, education, income, history of diabetes, hypertension, dyslipidemia, cardiovascular diseases.	Lowest exposure concentration for a significant adverse health outcome response: 1.10-2.10 ng/mL for year 3; 2.20-4.10 ng/mL for year 6. Year 3 MiBP Beta (95% CI) for Q2 vs. Q1: -0.48 (-1.83-0.87)Year 6 for Q3 vs. Q1: -0.48 (-1.88-0.92). Significant associations between Q2 and Q1 Beta for weight change in year 3 and for Q3 vs. Q1 in year 6.	Santana et. al 2019 5613207 Medium
Overweight and obese patients	Health Effect: Nutritional/Metabolic-Weight change-Non-cancer-Nutritional/Metabolic-Overweight and obesity-Non-cancer. Outcome measure: Height and weight measured at baseline, year 3, and year 6 clinic visits and used to determine BMI	Patients in clinics. Adults (18+), Older Adults (65+). United States. Female. Nested Case-Control. PESS: . Postmenopausal women from clinics throughout the United States (enrolled n=1257; used in analysis n=997). Women's Health Initiative. 1993-1998, follow-up: through 2013.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured at clinic visits.	Logistic Regression. Confounders adjusted for: creatinine, age, ethnicity, alcohol use, physical activity, smoking status, healthy eating index, dietary energy intake, hormone replacement therapy use, education, income, history of diabetes, hypertension, dyslipidemia, cardiovascular diseases.	Lowest exposure concentration for a significant adverse health outcome response: Overweight: 0.1008-0.1827 ng/mL; Obese: 0.1828-0.341 ng/mL. Overweight OR (95% CI) for Q2 vs. Q1: 1.58 (1.03-2.44); Q3 vs. Q1: 2.31 (1.44-3.69); Q4 vs. Q1: 2.72 (1.57-4.72)Obese OR (95% CI) for Q3 vs. Q1: 2.33 (1.38=3.94); Q4 vs. Q1: 3.29 (1.80-6.03). Significant positive OR for Q2-4 of DEHP metabolites and overweight patients; significant positive OR for Q3-4 of DEHP metabolites and obese patients.	Santana et. al 2019 5613207 Medium
Overweight and obese patients	Health Effect: Nutritional/Metabolic-Weight change-Non-cancer-Nutritional/Metabolic-Overweight and obesity-Non-cancer. Outcome measure: Height and weight measured at baseline, year 3, and year 6 clinic visits and used to determine BMI	Patients in clinics. Adults (18+), Older Adults (65+). United States. Female. Nested Case-Control. PESS: . Postmenopausal women from clinics throughout the United States (enrolled n=1257; used in analysis n=997). Women's Health Initiative. 1993-1998, follow-up: through 2013.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured at clinic visits.	Logistic Regression. Confounders adjusted for: creatinine, age, ethnicity, alcohol use, physical activity, smoking status, healthy eating index, dietary energy intake, hormone replacement therapy use, education, income, history of diabetes, hypertension, dyslipidemia, cardiovascular diseases.	Lowest exposure concentration for a significant adverse health outcome response: Overweight: 2.00-4.10 ng/mL. Overweight OR (95% CI) for Q3 vs. Q1: 1.60 (1.02-2.51); Q4 vs. Q1: 1.71 (1.04-2.80). Significant positive OR for Q3-4 of MEHP metabolites and overweight patients; no significant associations for obese patients.	Santana et. al 2019 5613207 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Overweight and obese patients	Health Effect: Nutritional/Metabolic-Weight change-Non-cancer-Nutritional/Metabolic-Overweight and obesity-Non-cancer. Outcome measure: Height and weight measured at baseline, year 3, and year 6 clinic visits and used to determine BMI	Patients in clinics. Adults (18+), Older Adults (65+). United States. Female. Nested Case-Control. PESS: . Postmenopausal women from clinics throughout the United States (enrolled n=1257; used in analysis n=997). Women's Health Initiative. 1993-1998, follow-up: through 2013.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured at clinic visits.	Logistic Regression. Confounders adjusted for: creatinine, age, ethnicity, alcohol use, physical activity, smoking status, healthy eating index, dietary energy intake, hormone replacement therapy use, education, income, history of diabetes, hypertension, dyslipidemia, cardiovascular diseases.	Lowest exposure concentration for a significant adverse health outcome response: Overweight: 17.20-33.00 MEHHP: 4 0.60-9.20 ng/mL 9.Overweight: 17.20-33.20 ng/mL; Obese: 17.20-33.00 ng/mL. Overweight OR (95% CI) for Q3 vs. Q1: 1.80 (1.14-2.83); Q4 vs. Q1: 2.33 (1.36-3.98)Obese OR (95% CI) for Q3 vs. Q1: 1.96 (1.17-3.30); Q4 vs. Q1: 2.93 (1.62-5.31). Significant positive OR for Q3-4 of MEHHP metabolites and overweight patients; Significant positive OR for Q3-4 of MEHHP metabolites and obese patients.	Santana et. al 2019 5613207 Medium
Overweight and obese patients	Health Effect: Nutritional/Metabolic-Weight change-Non-cancer-Nutritional/Metabolic-Overweight and obesity-Non-cancer. Outcome measure: Height and weight measured at baseline, year 3, and year 6 clinic visits and used to determine BMI	Patients in clinics. Adults (18+), Older Adults (65+). United States. Female. Nested Case-Control. PESS: . Postmenopausal women from clinics throughout the United States (enrolled n=1257; used in analysis n=997). Women's Health Initiative. 1993-1998, follow-up: through 2013.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured at clinic visits.	Logistic Regression. Confounders adjusted for: creatinine, age, ethnicity, alcohol use, physical activity, smoking status, healthy eating index, dietary energy intake, hormone replacement therapy use, education, income, history of diabetes, hypertension, dyslipidemia, cardiovascular diseases.	Lowest exposure concentration for a significant adverse health outcome response: Overweight: 10.70-20.40 g/mL; Obese: 10.70-20.40 ng/mL. Overweight OR (95% CI) for Q3 vs. Q1: 1.84 (1.16-2.90); Q4 vs. Q1: 2.01 (1.19-3.43)Obese OR (95% CI) for Q3 vs. Q1: 1.89 (1.13-3.16); Q4 vs. Q1: 2.40 (1.33-4.32). Significant positive OR for Q3-4 of MEOHP metabolites and overweight patients; Significant positive OR for Q3-4 of MEOHP metabolites and obese patients.	Santana et. al 2019 5613207 Medium
Overweight and obese patients	Health Effect: Nutritional/Metabolic-Weight change-Non-cancer-Nutritional/Metabolic-Overweight and obesity-Non-cancer. Outcome measure: Height and weight measured at baseline, year 3, and year 6 clinic visits and used to determine BMI	Patients in clinics. Adults (18+), Older Adults (65+). United States. Female. Nested Case-Control. PESS: . Postmenopausal women from clinics throughout the United States (enrolled n=1257; used in analysis n=997). Women's Health Initiative. 1993-1998, follow-up: through 2013.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured at clinic visits.	Logistic Regression. Confounders adjusted for: creatinine, age, ethnicity, alcohol use, physical activity, smoking status, healthy eating index, dietary energy intake, hormone replacement therapy use, education, income, history of diabetes, hypertension, dyslipidemia, cardiovascular diseases.	Lowest exposure concentration for a significant adverse health outcome response: Overweight: 22.70-41.50 ng/mL; Obese: 22.70-41.50 ng/mL. Overweight OR (95% CI) for Q3 vs. Q1: 1.98 (1.24-3.16); Q4 vs. Q1: 2.57 (1.49-4.43)Obese OR (95% CI) for Q3 vs. Q1: 2.48 (1.46-4.19); Q4 vs. Q1: 3.50 (1.90-6.45). Significant positive OR for Q3-4 of MECPP metabolites and overweight patients; Significant positive OR for Q3-4 of MECPP metabolites and obese patients.	Santana et. al 2019 5613207 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Autism Spectrum Disorder (ASD)	Health Effect: Neurological/Behavioral-Autism spectrum disorder (ASD), non-typical development (Non-TD)-Non-cancer. Outcome measure: Autism Spectrum Disorder (ASD) and Non-Typical Development (Non-TD) assessed by licensed clinical psychologists using the Autism Diagnostic Observation Schedules (ADOS) and by administration of the Mullen Scales of Early Learning (MSEL).	General public, Pregnant people. Preschool (3-5), Adults (18+). United States; Northern California. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). MARBLES (Markers of Autism Risk in Babies – Learning Early Signs), California, United States, n = 201 (boys = 122, girls = 79). Markers of Autism Risk in Babies – Learning Early Signs (MARBLES). Recruitment: 2006-2014, Follow-up: age 3.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during each trimester of pregnancy.	Logistic Regression. Confounders adjusted for: pre-pregnancy BMI, year of birth (linear and squared terms), and home-ownership.	Lowest exposure concentration for a significant adverse health outcome response: continuous. RRR (95% CI) for the association between ΣDEHP measured in mid-late pregnancy and Non-TD in boys: 1.87 (1.02, 3.41). Significant positive association between ΣDEHP concentrations in mid-late pregnancy and non-typical development (vs. typical development) in boys. Associations in girls, in the entire study population, and in analyses stratified by prenatal vitamin use not significant. Associations with ASD not significant..	Shin et. al 2018 5043457 High

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Eczema	Health Effect: Immune/Hematological-Eczema-Non-cancer. Outcome measure: ISAAC questionnaire and doctor diagnosis	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Adults (18+). France; Nancy and Poitiers. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). 604 male children in Nancy and Poitiers, France (mothers recruited during pregnancy). EDEN (Etude des Déterminants pré et postnatals du développement de la santé de l'Enfant). Recruitment: 2003-2006; Follow-up: Up to 2011.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Logistic Regression. Confounders adjusted for: Parental asthma/rhinitis/eczema, maternal smoking, maternal age, maternal BMI, maternal education level, gestational age, number of siblings, recruitment center.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. OR (95% CI) per 1-unit increase in MiBP:Eczema at age 1: 1.78 (0.95, 3.33)Eczema at age 2: 1.15 (0.64, 2.09)Eczema at age 3: 1.81 (0.94, 3.49)Eczema at age 4: 1.68 (1.16, 2.45)Eczema at age 5: 1.63 (1.12, 2.36)Early-onset eczema (0-24 mos): 1.27 (1.00, 1.72)Late-onset eczema (24-60 mos): 1.55 (1.10, 2.18)Ever eczema, sensitized boys: 1.87 (1.01-3.48)Ever eczema, non-sensitized boys: 1.32 (0.86-2.01). Significant positive associations were reported for prenatal MiBP and eczema in preschool boys occurring at ages 4 years and older, with earlier ages nearing statistical significance. Associations with ever eczema through age 5 years and MiBP were significant only in boys with atopy, characterized based on elevated IgE at age 5 years (i.e. sensitized boys)..	Soomro et. al 2018 4728712 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Eczema	Health Effect: Immune/Hematological-Eczema-Non-cancer. Outcome measure: ISAAC questionnaire and doctor diagnosis	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Adults (18+). France; Nancy and Poitiers. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). 604 male children in Nancy and Poitiers, France (mothers recruited during pregnancy). EDEN (Etude des Déterminants pré et postnatals du développement de la santé de l'Enfant). Recruitment: 2003-2006; Follow-up: Up to 2011.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Logistic Regression. Confounders adjusted for: Parental asthma/rhinitis/eczema, maternal smoking, maternal age, maternal BMI, maternal education level, gestational age, number of siblings, recruitment center.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. OR (95% CI) per 1-unit increase in the prenatal sum of DEHP metabolites and eczema in boys occurring at age 5 years: 1.08 (1.00, 1.18). For individual metabolites, associations were significant for:-MEHP and eczema at age 5 years: 1.38 (1.03, 1.85) -MECPP and eczema at age 5 years: 1.46 ((1.04, 2.06)Ever eczema, sensitized boys: 1.22 (1.07-1.38) Ever eczema, non-sensitized boys: 1.02 (0.93-1.13). A significant positive association was reported for the sum of DEHP metabolites during pregnancy and eczema in preschool boys occurring at age 5 years. Positive associations with p-values <0.10 were reported also at age 4 years and for late-onset (ages 24-60 mos) eczema. Other DEHP metabolites showed significant positive associations at the same ages. Associations with DEHP and ever eczema through age 5 years were significant only in boys with atopy, characterized based on elevated IgE at age 5 years (i.e. sensitized boys)..	Soomro et. al 2018 4728712 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Atopic status	Health Effect: Immune/Hematological-Atopic status (total serum IgE ≥60 IU/mL)-Non-cancer. Outcome measure: Serum IgE ≥60 IU/mL at age 5 years	General public. Infant (0-1), Toddler (2-3), Preschool (3-5). France; Nancy and Poitiers. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). 604 male children in Nancy and Poitiers, France (mothers recruited during pregnancy). EDEN (Etude des Déterminants pré et postnatals du développement de la santé de l'Enfant). Recruitment: 2003-2006; Follow-up: Up to 2011.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Logistic Regression. Confounders adjusted for: Parental asthma/rhinitis/eczema, maternal smoking, maternal age, maternal BMI, maternal education level, gestational age, number of siblings, recruitment center.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. p=0.01 for the prenatal sum of DEHP metabolites and elevated total IgE in boys. The text stated that the sum of DEHP and individual DEHP metabolites were significantly associated with boys' total IgE levels at age 5 years. p-values were provided without effect estimates as this was a complementary analysis..	Soomro et. al 2018 4728712 Medium
Respiratory symptoms (asthma, hay fever, rhinitis, and wheeze) in the past 12 months	Health Effect: Lung/Respiratory-Asthma, wheeze, hay fever, rhinitis (symptoms in the past 12 months)-Non-cancer. Outcome measure: Self-reported via questionnaire	General public. Adults (18+). United States. Female, Male. Cross-Sectional. PESS: . 1091 adults enrolled in NHANES 2005-2006 with spot urine samples and dust endotoxin levels reported.. e National Health and Nutrition Examination Survey (NHANES). 2005-2006.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Acute (less than 24 hours) Exposure measured in adults >=18 years of age via spot urine samples.	Logistic Regression. Confounders adjusted for: age, gender, race/ethnicity, BMI, creatinine, and cotinine.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Wheeze:ΣDEHP aOR (95% CI) with 1-unit increase log10-transformed, high endotoxin: 1.47 (1.01, 2.13); Medium endotoxin: 1.38 (0.95, 2.01); Low endotoxin: 1.12 (0.76, 1.64); Model Interaction term p-value: 0.03. Asthma: no significant associations noted for ΣDEHP and asthma.. ΣDEHP had a significant endotoxin interaction term within the model for low, medium and high endotoxin with an endotoxin interaction term p-value of 0.03. No significant associations were found for ΣDEHP and asthma. There was no interaction between endotoxin level and any phthalates with rhinitis or hay fever..	Strassle et. al 2018 4728797 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
IQ at age 7	Health Effect: Neurological/Behavioral-full scale IQ-Non-cancer. Outcome measure: Wechsler Intelligence Scale for Children, 4th edition (WISC-IV)	General public, Pregnant people. Middle childhood (6-11). Sweden; Varmland county. Female, Male. Cohort (Prospective). PESS: Lifestage , Other Chemical and Non-chemical stressors (ex. exposure to other substances that affect same organ as test chemical). Lifestage PESS: Children (age 1 year through < 11 years). Swedish Environmental Longitudinal Mother and Child, Asthma and Allergy (SELMA) study: 718 mother-child pairs from Varmland county, Sweden recruited during first trimester. Swedish Environmental Longitudinal Mother and Child, Asthma and Allergy (SELMA). Recruitment: 2007-2010; Follow-up: child age 7.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Weighted quantile sum regression. Confounders adjusted for: child sex, parity, maternal age, maternal weight, maternal education, maternal IQ (RAVEN), maternal smoking.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) for an IQR change in the chemical mixture in the full sample explanatory approach: -2.2 (-3.4, -1.0); weight of MBzP in this model: 6%. Weight of MBzP in WQS regression for the chemical mixture was 6% (above the threshold of concern), suggesting MBzP is a key chemical of concern driving the observed negative association with IQ.	Tanner et. al 2020 5933606 Medium
All-cause mortality	Health Effect: Mortality-All-cause mortality, CVD mortality-Non-cancer. Outcome measure: National Death Index	General public. Adults (18+). United States. Female, Male. Cohort (Prospective). PESS: . General population of NHANES adults aged 40 years and older (n=5,303). NHANES. Recruitment: 2001-2010; Follow-up: Through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at enrollment and prior to outcome.	Cox Proportional Hazards Model. Confounders adjusted for: age, race/ethnicity, urinary creatinine, education levels, family income status, smoking, alcohol use, physical activity, total energy intake, HEI2010 score, survey year and BMI..	Lowest exposure concentration for a significant adverse health outcome response: T2. HR (95 CI) for association between MnBP and all-cause mortality in analysis with survey weights:Continuous (per ln-unit MnBP): 1.10 (1.03, 1.19)Tertile 2 vs. Tertile 1: 1.31 (1.03, 1.66)Tertile 3 vs. Tertile 1: 1.21 (0.94, 1.54). A significant positive association was observed for continuous MnBP and the 2nd Tertile of MnBP and all-cause mortality when accounting for survey weights. In unweighted analysis, continuous MnBP, T2, and T3 of MnBP had significant positive associations with all-cause mortality..	Trasande et. al 2021 9495379 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
All-cause mortality	Health Effect: Mortality-All-cause mortality, CVD mortality-Non-cancer. Outcome measure: National Death Index	General public. Adults (18+). United States. Female, Male. Cohort (Prospective). PESS: . General population of NHANES adults aged 40 years and older (n=5,303). NHANES. Recruitment: 2001-2010; Follow-up: Through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at enrollment and prior to outcome.	Cox Proportional Hazards Model. Confounders adjusted for: age, race/ethnicity, urinary creatinine, education levels, family income status, smoking, alcohol use, physical activity, total energy intake, HEI2010 score, survey year and BMI..	Lowest exposure concentration for a significant adverse health outcome response: Continuous. HR (95 CI) for association between MBzP and all-cause mortality in analysis with survey weights:Continuous (per ln-unit MBzP): 1.11 (1.04, 1.19)Tertile 2 vs. Tertile 1: 1.13 (0.92, 1.40) Tertile 3 vs. Tertile 1: 1.20 (0.96, 1.50). A significant positive association was observed for continuous MBzP and all-cause mortality when accounting for survey weights. In unweighted analysis, the continuous association maintained significance and a significant positive association was reported for T3..	Trasande et. al 2021 9495379 Medium
All-cause mortality	Health Effect: Mortality-All-cause mortality, CVD mortality-Non-cancer. Outcome measure: National Death Index	General public. Adults (18+). United States. Female, Male. Cohort (Prospective). PESS: . General population of NHANES adults aged 40 years and older (n=5,303). NHANES. Recruitment: 2001-2010; Follow-up: Through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at enrollment and prior to outcome.	Cox Proportional Hazards Model. Confounders adjusted for: age, race/ethnicity, urinary creatinine, education levels, family income status, smoking, alcohol use, physical activity, total energy intake, HEI2010 score, survey year and BMI..	Lowest exposure concentration for a significant adverse health outcome response: T3. HR (95 CI) for sum of DEHP metabolites and all-cause mortality in analysis with survey weights (Sum DEHP metabolites):Continuous: 1.10 (1.03, 1.19)Tertile 2 vs. Tertile 1: 1.18 (0.97, 1.45)Tertile 3 vs. Tertile 1: 1.42 (1.13, 1.78)HR (95 CI) for analysis with survey weights significant in females only (Sum DEHP metabolites):Continuous: 1.16 (1.03, 1.30)Tertile 2 vs. Tertile 1: 1.17 (0.85, 1.60) Tertile 3 vs. Tertile 1: 1.55 (1.14, 2.11)HR (95 CI) for analysis with survey weights significant in white participants only (Sum DEHP metabolites):Continuous: 1.12 (1.03, 1.22)Tertile 2 vs. Tertile 1: 1.31 (1.02, 1.68) Tertile 3 vs. Tertile 1: 1.43 (1.09, 1.87). Significant positive associations were reported for continuous, T2, and T3 of the sum of DEHP metabolites and all-cause mortality. Supplemental materials stratified results by sex reported significant positive associations for females but not males (p-interaction=0.18), and significant positive associations for white participants but not non-white participants (p-interaction=0.29)..	Trasande et. al 2021 9495379 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
All-cause mortality	Health Effect: Mortality-All-cause mortality, CVD mortality-Non-cancer. Outcome measure: National Death Index	General public. Adults (18+). United States. Female, Male. Cohort (Prospective). PESS: . General population of NHANES adults aged 40 years and older (n=5,303). NHANES. Recruitment: 2001-2010; Follow-up: Through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at enrollment and prior to outcome.	Cox Proportional Hazards Model. Confounders adjusted for: age, race/ethnicity, urinary creatinine, education levels, family income status, smoking, alcohol use, physical activity, total energy intake, HEI2010 score, survey year and BMI..	Lowest exposure concentration for a significant adverse health outcome response: T3. HR (95 CI) for associations with all-cause mortality in analysis with survey weights (MEHHP):Continuous: 1.09 (1.02, 1.17)Tertile 2 vs. Tertile 1: 1.01 (0.84, 1.21)Tertile 3 vs. Tertile 1: 1.27 (1.01, 1.59)HR (95 CI) for analysis with survey weights (MEOHP):Continuous: 1.09 (1.02-1.17)Tertile 2 vs. Tertile 1: 1.07 (0.89, 1.28)Tertile 3 vs. Tertile 1: 1.32 (1.08, 1.62)HR (95 CI) for analysis with survey weights (MECCP):Continuous: 1.09 (0.997, 1.18)Tertile 2 vs. Tertile 1: 1.13 (0.92, 1.39)Tertile 3 vs. Tertile 1: 1.31 (1.04, 1.64). Significant positive associations were reported with T3 for MEHHP, MEOHP, MECPP, but not MEHP in weighted analysis and unweighted analyses. Unweighted analyses also reported significant positive associations for continuous MEHHP, MEOHP, and MECCP...	Trasande et. al 2021 9495379 Medium
CVD mortality	Health Effect: Mortality-All-cause mortality, CVD mortality-Non-cancer-Cardiovascular-CVD mortality-Non-cancer. Outcome measure: ICD-10 codes I00-I09, I11, I13, I20-I151, I60-I69	General public. Adults (18+). United States. Female, Male. Cohort (Prospective). PESS: . General population of NHANES adults aged 40 years and older (n=5,303). NHANES. Recruitment: 2001-2010; Follow-up: Through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at enrollment and prior to outcome.	Cox Proportional Hazards Model. Confounders adjusted for: age, race/ethnicity, urinary creatinine, education levels, family income status, smoking, alcohol use, physical activity, total energy intake, HEI2010 score, survey year and BMI..	Lowest exposure concentration for a significant adverse health outcome response: T3. HR (95 CI) for association with CVD mortality in analysis with survey weights (MEOHP):Continuous: 1.18 (1.04, 1.35)Tertile 2 vs. Tertile 1: 1.39 (0.96, 2.03)Tertile 3 vs. Tertile 1: 1.74 (1.05, 2.88). Significant positive associations were reported for continuous measures and T3 for MECPP, but no other individual DEHP metabolites in weighted analyses. In unweighted analyses, significant positive associations were reported for each DEHP metabolite, including MEHP (continuous, T2), MEOHP (continuous, T2 and T3), and MECPP (continuous, T2 and T3)..	Trasande et. al 2021 9495379 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Cancer mortality	Health Effect: Mortality-Cancer mortality-Cancer-Cancer/Carcinogenesis-Cancer mortality-Cancer. Outcome measure: ICD-10 codes C00-C97	General public. Adults (18+). United States. Female, Male. Cohort (Prospective). PESS: . General population of NHANES adults aged 40 years and older (n=5,303). NHANES. Recruitment: 2001-2010; Follow-up: Through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at enrollment and prior to outcome.	Cox Proportional Hazards Model. Confounders adjusted for: age, race/ethnicity, urinary creatinine, education levels, family income status, smoking, alcohol use, physical activity, total energy intake, HEI2010 score, survey year and BMI..	Lowest exposure concentration for a significant adverse health outcome response: T3. HR (95 CI) for MBzP association with cancer mortality in analysis with survey weights:Continuous (per ln MBzP): 1.19 (1.04, 1.36)Tertile 2 vs. Tertile 1: 1.17 (0.72, 1.92)Tertile 3 vs. Tertile 1: 1.25 (0.76, 2.05). Significant positive associations were reported for continuous MBzP and cancer mortality in weighted and unweighted analyses..	Trasande et. al 2021 9495379 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Uterine volume, uterine volume greater than or equal to the median	Health Effect: Reproductive/Developmental-uterine volume-Non-cancer. Outcome measure: Uterine size data was obtained through MRI within 12 months of surgery (n=35), ultrasound (n=20) and surgical pathology (n=1) reports.	General public. Adults (18+). United States of America; Washington, D.C.. Female. Cross-Sectional. PESS: Studies focusing on reproductive parameters. Women within the Fibroids Observational Research on Genes and the Environment (FORGE) study presenting to the George Washington University (GWU) gynecology clinic for evaluation for symptomatic fibroid tumors and surgical management were recruited 2014-2017. Eligible women were non-pregnant, premenopausal, English speaking, 18 years old or older, and intending to have their surgery at the GWU hospital. Ninety percent (n=61) of the n=68 women initially approached consented to participate. Final analysis was limited to the women (n=57) with urinary phthalate metabolite data.. Fibroids Observational Research on Genes and the Environment (FORGE) study. Recruitment: 2014-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured prior to surgery and up to 5 months after surgery..	Logistic Regression. Confounders adjusted for: Final models for all analyses were adjusted for age, body mass index, and race/ethnicity..	Lowest exposure concentration for a significant adverse health outcome response: continuous. Uterine volume greater than or equal to the median–MEHP AOR (95% CI):)3.4 (1.2–9.5). Phthalate concentrations were positively associated with uterine volume greater than or equal to the median for MEHP..	Zota et. al 2019 5043589 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Uterine volume, uterine volume greater than or equal to the median	Health Effect: Reproductive/Developmental-uterine volume-Non-cancer. Outcome measure: Uterine size data was obtained through MRI within 12 months of surgery (n=35), ultrasound (n=20) and surgical pathology (n=1) reports.	General public. Adults (18+). United States of America; Washington, D.C.. Female. Cross-Sectional. PESS: Studies focusing on reproductive parameters. Women within the Fibroids Observational Research on Genes and the Environment (FORGE) study presenting to the George Washington University (GWU) gynecology clinic for evaluation for symptomatic fibroid tumors and surgical management were recruited 2014-2017. Eligible women were non-pregnant, premenopausal, English speaking, 18 years old or older, and intending to have their surgery at the GWU hospital. Ninety percent (n=61) of the n=68 women initially approached consented to participate. Final analysis was limited to the women (n=57) with urinary phthalate metabolite data.. Fibroids Observational Research on Genes and the Environment (FORGE) study. Recruitment: 2014-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured prior to surgery and up to 5 months after surgery..	Logistic Regression. Confounders adjusted for: Final models for all analyses were adjusted for age, body mass index, and race/ethnicity..	Lowest exposure concentration for a significant adverse health outcome response: continuous. Uterine volume greater than or equal to the median– MEHHP AOR (95% CI):4.3 (1.5–12.3). Phthalate concentrations were positively associated with uterine volume greater than or equal to the median for MEHHP..	Zota et. al 2019 5043589 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Uterine volume, uterine volume greater than or equal to the median	Health Effect: Reproductive/Developmental-uterine volume-Non-cancer. Outcome measure: Uterine size data was obtained through MRI within 12 months of surgery (n=35), ultrasound (n=20) and surgical pathology (n=1) reports.	General public. Adults (18+). United States of America; Washington, D.C.. Female. Cross-Sectional. PESS: Studies focusing on reproductive parameters. Women within the Fibroids Observational Research on Genes and the Environment (FORGE) study presenting to the George Washington University (GWU) gynecology clinic for evaluation for symptomatic fibroid tumors and surgical management were recruited 2014-2017. Eligible women were non-pregnant, premenopausal, English speaking, 18 years old or older, and intending to have their surgery at the GWU hospital. Ninety percent (n=61) of the n=68 women initially approached consented to participate. Final analysis was limited to the women (n=57) with urinary phthalate metabolite data.. Fibroids Observational Research on Genes and the Environment (FORGE) study. Recruitment: 2014-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured prior to surgery and up to 5 months after surgery..	Logistic Regression. Confounders adjusted for: Final models for all analyses were adjusted for age, body mass index, and race/ethnicity..	Lowest exposure concentration for a significant adverse health outcome response: continuous. Uterine volume greater than or equal to the median– MEOHP AOR (95% CI):4.5 (1.5–13.4). Phthalate concentrations were positively associated with uterine volume greater than or equal to the median for MEOHP..	Zota et. al 2019 5043589 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Uterine volume, uterine volume greater than or equal to the median	Health Effect: Reproductive/Developmental-uterine volume-Non-cancer. Outcome measure: Uterine size data was obtained through MRI within 12 months of surgery (n=35), ultrasound (n=20) and surgical pathology (n=1) reports.	General public. Adults (18+). United States of America; Washington, D.C.. Female. Cross-Sectional. PESS: Studies focusing on reproductive parameters. Women within the Fibroids Observational Research on Genes and the Environment (FORGE) study presenting to the George Washington University (GWU) gynecology clinic for evaluation for symptomatic fibroid tumors and surgical management were recruited 2014-2017. Eligible women were non-pregnant, premenopausal, English speaking, 18 years old or older, and intending to have their surgery at the GWU hospital. Ninety percent (n=61) of the n=68 women initially approached consented to participate. Final analysis was limited to the women (n=57) with urinary phthalate metabolite data.. Fibroids Observational Research on Genes and the Environment (FORGE) study. Recruitment: 2014-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured prior to surgery and up to 5 months after surgery..	Logistic Regression. Confounders adjusted for: Final models for all analyses were adjusted for age, body mass index, and race/ethnicity..	Lowest exposure concentration for a significant adverse health outcome response: continuous. Uterine volume greater than or equal to the median– MECPP AOR (95% CI):5.3 (1.8–15.9). Phthalate concentrations were positively associated with uterine volume greater than or equal to the median for MECPP..	Zota et. al 2019 5043589 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Uterine volume, uterine volume greater than or equal to the median	Health Effect: Reproductive/Developmental-uterine volume-Non-cancer. Outcome measure: Uterine size data was obtained through MRI within 12 months of surgery (n=35), ultrasound (n=20) and surgical pathology (n=1) reports.	General public. Adults (18+). United States of America; Washington, D.C.. Female. Cross-Sectional. PESS: Studies focusing on reproductive parameters. Women within the Fibroids Observational Research on Genes and the Environment (FORGE) study presenting to the George Washington University (GWU) gynecology clinic for evaluation for symptomatic fibroid tumors and surgical management were recruited 2014-2017. Eligible women were non-pregnant, premenopausal, English speaking, 18 years old or older, and intending to have their surgery at the GWU hospital. Ninety percent (n=61) of the n=68 women initially approached consented to participate. Final analysis was limited to the women (n=57) with urinary phthalate metabolite data.. Fibroids Observational Research on Genes and the Environment (FORGE) study. Recruitment: 2014-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured prior to surgery and up to 5 months after surgery..	Logistic Regression. Confounders adjusted for: Final models for all analyses were adjusted for age, body mass index, and race/ethnicity..	Lowest exposure concentration for a significant adverse health outcome response: continuous. Uterine volume greater than or equal to the median-MHiBP AOR (95% CI): 2.6 (1.0-6.4). No significant associations were noted between MiBP and odds of uterine volume greater than or equal to the median.. Phthalate concentrations were positively associated with odds of uterine volume greater than the median for MHiBP. No significant associations were noted between MiBP and odds of uterine volume greater than the median..	Zota et. al 2019 5043589 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Uterine volume, percent difference in uterine volume	Health Effect: Reproductive/Developmental-uterine volume-Non-cancer. Outcome measure: Uterine size data was obtained through MRI within 12 months of surgery (n=35), ultrasound (n=20) and surgical pathology (n=1) reports.	General public. Adults (18+). United States of America; Washington, D.C.. Female. Cross-Sectional. PESS: Studies focusing on reproductive parameters. Women within the Fibroids Observational Research on Genes and the Environment (FORGE) study presenting to the George Washington University (GWU) gynecology clinic for evaluation for symptomatic fibroid tumors and surgical management were recruited 2014-2017. Eligible women were non-pregnant, premenopausal, English speaking, 18 years old or older, and intending to have their surgery at the GWU hospital. Ninety percent (n=61) of the n=68 women initially approached consented to participate. Final analysis was limited to the women (n=57) with urinary phthalate metabolite data.. Fibroids Observational Research on Genes and the Environment (FORGE) study. Recruitment: 2014-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured prior to surgery and up to 5 months after surgery..	Linear Regression. Confounders adjusted for: Final models for all analyses were adjusted for age, body mass index, and race/ethnicity..	Lowest exposure concentration for a significant adverse health outcome response: continuous. Uterine volume percent difference–MEHHP % difference (95% CI): 26.2 (3.1, 54.6), MEOHP % difference (95% CI): 27.1 (4.7, 54.3), MECPP % difference (95% CI): 31.6 (5.9, 63.5). Phthalate concentrations were not significantly associated with percent difference in uterine volume for MEHP.. Phthalate concentrations were positively associated with percent difference in uterine volume for MEHHP, MEOHP and MECPP. Phthalate concentrations were not significantly associated with percent difference in uterine volume for MEHP..	Zota et. al 2019 5043589 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Uterine volume, percent difference in uterine volume	Health Effect: Reproductive/Developmental-uterine volume-Non-cancer. Outcome measure: Uterine size data was obtained through MRI within 12 months of surgery (n=35), ultrasound (n=20) and surgical pathology (n=1) reports.	General public. Adults (18+). United States of America; Washington, D.C.. Female. Cross-Sectional. PESS: Studies focusing on reproductive parameters. Women within the Fibroids Observational Research on Genes and the Environment (FORGE) study presenting to the George Washington University (GWU) gynecology clinic for evaluation for symptomatic fibroid tumors and surgical management were recruited 2014-2017. Eligible women were non-pregnant, premenopausal, English speaking, 18 years old or older, and intending to have their surgery at the GWU hospital. Ninety percent (n=61) of the n=68 women initially approached consented to participate. Final analysis was limited to the women (n=57) with urinary phthalate metabolite data.. Fibroids Observational Research on Genes and the Environment (FORGE) study. Recruitment: 2014-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured prior to surgery and up to 5 months after surgery..	Linear Regression. Confounders adjusted for: Final models for all analyses were adjusted for age, body mass index, and race/ethnicity..	Lowest exposure concentration for a significant adverse health outcome response: continuous. Uterine volume percent difference–MEOHP % difference (95% CI): 27.1 (4.7, 54.3).. Phthalate concentrations were positively associated with percent difference in uterine volume forMEOHP..	Zota et. al 2019 5043589 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Uterine volume, percent difference in uterine volume	Health Effect: Reproductive/Developmental-uterine volume-Non-cancer. Outcome measure: Uterine size data was obtained through MRI within 12 months of surgery (n=35), ultrasound (n=20) and surgical pathology (n=1) reports.	General public. Adults (18+). United States of America; Washington, D.C.. Female. Cross-Sectional. PESS: Studies focusing on reproductive parameters. Women within the Fibroids Observational Research on Genes and the Environment (FORGE) study presenting to the George Washington University (GWU) gynecology clinic for evaluation for symptomatic fibroid tumors and surgical management were recruited 2014-2017. Eligible women were non-pregnant, premenopausal, English speaking, 18 years old or older, and intending to have their surgery at the GWU hospital. Ninety percent (n=61) of the n=68 women initially approached consented to participate. Final analysis was limited to the women (n=57) with urinary phthalate metabolite data.. Fibroids Observational Research on Genes and the Environment (FORGE) study. Recruitment: 2014-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured prior to surgery and up to 5 months after surgery..	Linear Regression. Confounders adjusted for: Final models for all analyses were adjusted for age, body mass index, and race/ethnicity..	Lowest exposure concentration for a significant adverse health outcome response: continuous. Uterine volume percent difference–MECPP % difference (95% CI): 31.6 (5.9, 63.5).. Phthalate concentrations were positively associated with percent difference in uterine volume for MECPP..	Zota et. al 2019 5043589 Medium

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Activated partial thrombo-plastin time (APTT)	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer-Immune/Hematological-Maternal hematologic parameters in pregnancy: total white blood cell counts (WBC), red blood cell counts (RBC), hemoglobin (Hb), and platelet counts (PLT)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Linear Regression. Confounders adjusted for: gestational age at sample collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron and folate supplementation during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: continuous. APTT (seconds) beta (95% CI) =0.211 (0.085, 0.338); p-FDR=0.0088. Significant positive associations were reported for ln-transformed MBP with APTT, including after FDR adjustment and after excluding several pregnancy complications..	Jiang et. al 2018 4728517 Medium
hemoglobin (Hb)	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Linear Regression. Confounders adjusted for: gestational age at sample collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron supplementation during pregnancy, infant sex.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Hb (g/L) beta (95% CI) = -0.530 (-0.922, -0.138), p-FDR =0.0216. Ln-MEHP was negatively associated with Hb, including after FDR adjustment and after excluding several pregnancy complications..	Jiang et. al 2018 4728517 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
hemoglobin (Hb)	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Linear Regression. Confounders adjusted for: gestational age at sample collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron supplementation during pregnancy, infant sex.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Hb (g/L) beta (95% CI) = -0.947 (-1.611, -0.282), p-FDR =0. 0053. Ln-MEOHP was negatively associated with Hb, including after FDR adjustment and after excluding several pregnancy complications..	Jiang et. al 2018 4728517 Medium
hemoglobin (Hb)	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Linear Regression. Confounders adjusted for: gestational age at sample collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron supplementation during pregnancy, infant sex.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Hb (g/L) beta (95% CI) = -1.048 (-1.737, -0.360), p-FDR =0. 0029. Ln-MECPP was negatively associated with Hb, including after FDR adjustment and after excluding several pregnancy complications..	Jiang et. al 2018 4728517 Medium
Anemia	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Logistic Regression. Confounders adjusted for: gestational age at samples collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron and folate supplementation during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for ln-MEHP and odds of anemia = 1.25 (1.12, 1.39), p-FDR < 0.0001. MEHP was positively and significantly associated with anemia in the third trimester..	Jiang et. al 2018 4728517 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Anemia	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Logistic Regression. Confounders adjusted for: gestational age at samples collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron and folate supplementation during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for ln-MEOHP and odds of anemia = 1.22 (1.03, 1.46, p-FDR=1.45. MEOHP was positively and significantly associated with anemia in the third trimester..	Jiang et. al 2018 4728517 Medium
Anemia	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Logistic Regression. Confounders adjusted for: gestational age at samples collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron and folate supplementation during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for ln-MECPP and odds of anemia = 1.22 (1.03, 1.46), p-FDR=0.033. MECPP was positively and significantly associated with anemia in the third trimester..	Jiang et. al 2018 4728517 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Forced vital capacity (FVC)	Health Effect: Lung/Respiratory-Spirometry (FEV1, FVC, FEV1/FVC, FEF25-75)-Non-cancer. Outcome measure: Spirometer administered by trained technician	General public. Adults (18+), Older Adults (65+). South Korea; Seoul. Female, Male. Cohort (Prospective). PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition), Lifestyle Activities (ex. exercise, smoking), Sociodemographic Status (ex. race/ethnicity, socioeconomic), Other Chemical and Non-chemical stressors (ex. exposure to other substances that affect same organ as test chemical). Lifestage PESS: Older adults (age >= 65 years). South Korean residents from 2 elderly welfare centers aged 60+ (Enrolled n=559; Used in analysis n=537). 2012-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via biomonitoring at each survey along with spirometry.	Linear mixed model. Confounders adjusted for: age, sex, monthly household income, educational level, active smoking status, pack-years of smoking, passive smoking status, alcohol consumption, physical activity, comorbidity status, height, weight.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) continuous exposure: -0.02 (-0.03, -0.001). Significant negative association reported of FVC with doubling of exposure. Negative association reported for annual function with doubling of exposure but not significant..	Kim et. al 2018 4728477 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Forced expiratory volume in 1 s (FEV)	Health Effect: Lung/Respiratory-Spirometry (FEV1, FVC, FEV1/FVC, FEF25-75)-Non-cancer. Outcome measure: Spirometer administered by trained technician	General public. Adults (18+), Older Adults (65+). South Korea; Seoul. Female, Male. Cohort (Prospective). PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition), Lifestyle Activities (ex. exercise, smoking), Sociodemographic Status (ex. race/ethnicity, socioeconomic), Other Chemical and Non-chemical stressors (ex. exposure to other substances that affect same organ as test chemical). Lifestage PESS: Older adults (age >= 65 years). South Korean residents from 2 elderly welfare centers aged 60+ (Enrolled n=559; Used in analysis n=537). 2012-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via biomonitoring at each survey along with spirometry.	Linear mixed model. Confounders adjusted for: age, sex, monthly household income, educational level, active smoking status, pack-years of smoking, passive smoking status, alcohol consumption, physical activity, comorbidity status, height, weight.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) continuous exposure: -0.02 (-0.03, -0.01). Significant negative association reported of FEV with doubling of exposure. Negative association reported for annual function with doubling of exposure but not significant..	Kim et. al 2018 4728477 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Forced vital capacity (FVC)	Health Effect: Lung/Respiratory-Spirometry (FEV1, FVC, FEV1/FVC, FEF25-75)-Non-cancer. Outcome measure: Spirometer administered by trained technician	General public. Adults (18+), Older Adults (65+). South Korea; Seoul. Female, Male. Cohort (Prospective). PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition), Lifestyle Activities (ex. exercise, smoking), Sociodemographic Status (ex. race/ethnicity, socioeconomic), Other Chemical and Non-chemical stressors (ex. exposure to other substances that affect same organ as test chemical). Lifestage PESS: Older adults (age >= 65 years). South Korean residents from 2 elderly welfare centers aged 60+ (Enrolled n=559; Used in analysis n=537). 2012-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via biomonitoring at each survey along with spirometry.	Linear mixed model. Confounders adjusted for: age, sex, monthly household income, educational level, active smoking status, pack-years of smoking, passive smoking status, alcohol consumption, physical activity, comorbidity status, height, weight.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) continuous exposure: -0.02 (-0.03, -0.004). Significant negative association reported of FVC with doubling of exposure. Negative association reported for annual function with doubling of exposure but not significant..	Kim et. al 2018 4728477 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Forced expiratory volume in 1 s (FEV)	Health Effect: Lung/Respiratory-Spirometry (FEV1, FVC, FEV1/FVC, FEF25-75)-Non-cancer. Outcome measure: Spirometer administered by trained technician	General public. Adults (18+), Older Adults (65+). South Korea; Seoul. Female, Male. Cohort (Prospective). PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition), Lifestyle Activities (ex. exercise, smoking), Sociodemographic Status (ex. race/ethnicity, socioeconomic), Other Chemical and Non-chemical stressors (ex. exposure to other substances that affect same organ as test chemical). Lifestage PESS: Older adults (age >= 65 years). South Korean residents from 2 elderly welfare centers aged 60+ (Enrolled n=559; Used in analysis n=537). 2012-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via biomonitoring at each survey along with spirometry.	Linear mixed model. Confounders adjusted for: age, sex, monthly household income, educational level, active smoking status, pack-years of smoking, passive smoking status, alcohol consumption, physical activity, comorbidity status, height, weight.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) continuous exposure: -0.01 (-0.03, -0.003). Significant negative association reported of FEV with doubling of exposure. Negative association reported for annual function with doubling of exposure but not significant..	Kim et. al 2018 4728477 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Forced vital capacity (FVC)	Health Effect: Lung/Respiratory-Spirometry (FEV1, FVC, FEV1/FVC, FEF25-75)-Non-cancer. Outcome measure: Spirometer administered by trained technician	General public. Adults (18+), Older Adults (65+). South Korea; Seoul. Female, Male. Cohort (Prospective). PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition), Lifestyle Activities (ex. exercise, smoking), Sociodemographic Status (ex. race/ethnicity, socioeconomic), Other Chemical and Non-chemical stressors (ex. exposure to other substances that affect same organ as test chemical). Lifestage PESS: Older adults (age >= 65 years). South Korean residents from 2 elderly welfare centers aged 60+ (Enrolled n=559; Used in analysis n=537). 2012-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via biomonitoring at each survey along with spirometry.	Linear mixed model. Confounders adjusted for: age, sex, monthly household income, educational level, active smoking status, pack-years of smoking, passive smoking status, alcohol consumption, physical activity, comorbidity status, height, weight.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) continuous exposure: -0.02 (-0.03, -0.001). Significant negative association reported of FVC with doubling of exposure. Negative association reported for annual function with doubling of exposure but not significant..	Kim et. al 2018 4728477 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Peak expiratory flow rate (PEFR)	Health Effect: Lung/Respiratory-Peak Flow: PEFR-Non-cancer. Outcome measure: Peak flow meter	General public, Patients in clinics. Middle childhood (6-11), Teens (12-17). Korean; Seoul Metropolitan Area. Female, Male. Cohort (Prospective). PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition). Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 56 asthmatic children and adolescents (ages 6 to 16) living in Seoul Metropolitan Area, Korea. Enrolled and followed from between October 2013 and February 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Ingestion Unclear Repeated measures of exposure on the day of outcome ascertainment.	Linear mixed model. Confounders adjusted for: age, sex, BMI, ambient PM10, outdoor temperature, relative humidity, urinary cotinine level, and controller medication use.	Lowest exposure concentration for a significant adverse health outcome response: continuous. PEFR with 1-day lag for MEEHP LME Regression coefficients: -12.1795% confidence interval: (-21.74, -2.59)P < 0.05. Negative associations were found between the metabolite and PEFR for 0-, 1-, and 2-day lags. Only the models for a 1-day lag were significant..	Kim et. al 2018 5043508 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Peak expiratory flow rate (PEFR)	Health Effect: Lung/Respiratory-Fractional exhaled nitric oxide-Non-cancer. Outcome measure: Peak flow meter	General public, Patients in clinics. Middle childhood (6-11), Teens (12-17). Korean; Seoul Metropolitan Area. Female, Male. Cohort (Prospective). PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition). Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 56 asthmatic children and adolescents (ages 6 to 16) living in Seoul Metropolitan Area, Korea. Enrolled and followed from between October 2013 and February 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Ingestion Unclear Repeated measures of exposure on the day of outcome ascertainment.	Linear mixed model. Confounders adjusted for: age, sex, BMI, ambient PM10, outdoor temperature, relative humidity, urinary cotinine level, and controller medication use.	Lowest exposure concentration for a significant adverse health outcome response: continuous. FeNO for MEHHPLME Regression coefficients: 19.47Confidence interval: (9.28, 29.67)P < 0.05. Significant positive associations were found for all three phthatates and FeNO..	Kim et. al 2018 5043508 Low
Metabolic syndrome (MetS)	Health Effect: Cardiovascular-Metabolic syndrome (MetS)-Non-cancer. Outcome measure: Operational definition: current BP medication use, current anti-diabetic medication use, and body mass index (BMI) >30	General public. Adults (18+), Older Adults (65+). South Korea. Female, Male. Cross-Sectional. PESS: Other Chemical and Non-chemical stressors (ex. exposure to other substances that affect same organ as test chemical). 5251 general population adults in South Korea. Korean National Environmental Health Survey II (KNEHS). 2012-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure was measured via biomonitoring concurrent with outcome assessment.	Logistic Regression. Confounders adjusted for: creatinine, age, sex, education, income, marital status, aspartate aminotransferase, alanine aminotransferase.	Lowest exposure concentration for a significant adverse health outcome response: quartile 2. OR (95% CI) for Q2 vs. Q1: 1.345 (1.001 - 1.808); Q3 vs. Q1: 1.151 (0.854–1.550); Q4 vs. Q1: 1.334 (0.996–1.787). In the models adjusted for confounders, statistically significant positive associations were reported for Q2 vs. Q1. Associations for Q3 and Q4 were positive but not statistically significant. Results were alos significantly positive across all quartiles in the model adjusted only for creatinine..	Shim et. al 2019 5114010 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Metabolic syndrome (MetS)	Health Effect: Cardiovascular-Metabolic syndrome (MetS)-Non-cancer. Outcome measure: Operational definition: current BP medication use, current anti-diabetic medication use, and body mass index (BMI) >30	General public. Adults (18+), Older Adults (65+). South Korea. Female, Male. Cross-Sectional. PESS: Other Chemical and Non-chemical stressors (ex. exposure to other substances that affect same organ as test chemical). 5251 general population adults in South Korea. Korean National Environmental Health Survey II (KNEHS). 2012-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring concurrent with outcome assessment.	Logistic Regression. Confounders adjusted for: creatinine.	Lowest exposure concentration for a significant adverse health outcome response: quartile 2. OR (95% CI) for Q2 vs. Q1: 1.632 (1.231 - 2.166); Q3 vs. Q1: 1.966 (1.494–2.587); Q4 vs. Q1: 2.534 (1.942–3.305). Statistically significant positive associations were reported for all quartiles but only in the models that were adjusted only for creatinine and not the models that adjusted for other potential confounders. Results for the other models were positive but not statistically significant..	Shim et. al 2019 5114010 Medium
Metabolic syndrome (MetS)	Health Effect: Cardiovascular-Metabolic syndrome (MetS)-Non-cancer. Outcome measure: Operational definition: current BP medication use, current anti-diabetic medication use, and body mass index (BMI) >30	General public. Adults (18+), Older Adults (65+). South Korea. Female, Male. Cross-Sectional. PESS: Other Chemical and Non-chemical stressors (ex. exposure to other substances that affect same organ as test chemical). 5251 general population adults in South Korea. Korean National Environmental Health Survey II (KNEHS). 2012-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure was measured via biomonitoring concurrent with outcome assessment.	Logistic Regression. Confounders adjusted for: creatinine.	Lowest exposure concentration for a significant adverse health outcome response: quartile 2. OR (95% CI) for Q2 vs. Q1: 1.691 (1.277 - 2.238); Q3 vs. Q1: 1.870 (1.418–2.465); Q4 vs. Q1: 2.579 (1.978–3.362). Statistically significant positive associations were reported for all quartiles but only in the models that were adjusted only for creatinine and not the models that adjusted for other potential confounders. Results for the other models were positive but not statistically significant..	Shim et. al 2019 5114010 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Metabolic syndrome (MetS)	Health Effect: Cardiovascular-Metabolic syndrome (MetS)-Non-cancer. Outcome measure: Questionnaire	General public. Adults (18+), Older Adults (65+). South Korea. Female, Male. Cross-Sectional. PESS: Other Chemical and Non-chemical stressors (ex. exposure to other substances that affect same organ as test chemical). 5251 general population adults in South Korea. Korean National Environmental Health Survey II (KNEHS). 2012-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure was measured via biomonitoring concurrent with outcome assessment.	Logistic Regression. Confounders adjusted for: creatinine.	Lowest exposure concentration for a significant adverse health outcome response: quartile 3. OR (95% CI) for Q2 vs. Q1: 1.190 (0.918 - 1.542); Q3 vs. Q1: 1.377 (1.069–1.774); Q4 vs. Q1: 1.490 (1.160–1.912). Significant positive associations were reported for Q3 and Q4 vs Q1, but only in the model adjusted only for creatinine. Results from models 2 and 3 were not statistically significant..	Shim et. al 2019 5114010 Medium
Metabolic syndrome (MetS)	Health Effect: Cardiovascular-Metabolic syndrome (MetS)-Non-cancer. Outcome measure: Questionnaire	General public. Adults (18+), Older Adults (65+). South Korea. Female, Male. Cross-Sectional. PESS: Other Chemical and Non-chemical stressors (ex. exposure to other substances that affect same organ as test chemical). 5251 general population adults in South Korea. Korean National Environmental Health Survey II (KNEHS). 2012-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring concurrent with outcome assessment.	Logistic Regression. Confounders adjusted for: creatinine.	Lowest exposure concentration for a significant adverse health outcome response: quartile 2. OR (95% CI) for Q2 vs. Q1: 1.318 (1.015 - 1.711); Q3 vs. Q1:1.453 (1.124–1.878); Q4 vs. Q1: 1.615 (1.254–2.078). Significant positive associations were reported for all quartiles but only in the models adjusted for creatinine. Results for the other models were positive but not statistically significant..	Shim et. al 2019 5114010 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MBP and Hb: -0.55 (-0.74, -0.35). Significant inverse relationship in repeated measures model, where 1 ln unit increase in MBP was associated with a decrease in maternal hemoglobin. The magnitude of association was stronger in boys..	Zhu et. al 2018 4829283 Medium
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MBzP and Hb: -0.19 (-0.33, -0.05). Significant inverse relationship in repeated measures model, where 1 ln unit increase in MBzP was associated with a decrease in maternal hemoglobin. The magnitude of association was stronger in boys, non-significant in girls..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MEHP and Hb: -0.57 (-0.77, -0.37). Significant inverse relationship in repeated measures model, where 1 ln unit increase in MEHP was associated with a decrease in maternal hemoglobin. The magnitude of association was stronger in boys..	Zhu et. al 2018 4829283 Medium
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MEHHP and Hb: -0.54 (-0.77, -0.30). Significant inverse relationship in repeated measures model, where 1 ln unit increase in MEHHP was associated with a decrease in maternal hemoglobin. The magnitude of association was stronger in boys, non-significant in girls..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MEOHP and Hb: -0.49 (-0.75, -0.23). Significant inverse relationship in repeated measures model, where 1 ln unit increase in MEOHP was associated with a decrease in maternal hemoglobin. The magnitude of association was stronger in boys, non-significant in girls..	Zhu et. al 2018 4829283 Medium
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Generalized linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MBP and anemia: 1.21 (1.15, 1.27). Significant association between MBP and anemia in repeated measures model, where 1 ln unit increase in MBP increased the risk of anemia. The magnitude of association was stronger in boys..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Generalized linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MEHP and anemia: 1.20 (1.14, 1.26). Significant association between MEHP and anemia in repeated measures model, where higher MEHP increased the odds of anemia. The magnitude of association was stronger in boys..	Zhu et. al 2018 4829283 Medium
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Generalized linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MEHHP and anemia: 1.16 (1.09, 1.22). Significant association between MEHHP and anemia in repeated measures model, where exposure to MEHHP increased the odds of anemia. The magnitude of association was stronger in boys..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Generalized linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MEOHP and anemia: 1.13 (1.05, 1.20). Significant association between MEOHP and anemia in repeated measures model, where exposure to MEOHP increased the odds of anemia. The magnitude of association was stronger in boys..	Zhu et. al 2018 4829283 Medium
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Linear Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MBP and Hb: -1.04 (-1.41, -0.66). Significant association between phthalate metabolite and decreased hemoglobin levels in the third trimester. Associations significant in the first trimester, and in both sexes..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Linear Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MBzP and Hb: -0.35 (-0.65, -0.06). Significant association between phthalate metabolite and decreased hemoglobin levels in the third trimester. Association significant in boys, and in the second trimester..	Zhu et. al 2018 4829283 Medium
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Linear Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MEHP and Hb: -0.90 (-1.27, -0.54). Significant association between phthalate metabolite and decreased hemoglobin levels in the third trimester. Association significant in both sexes, and in other trimesters overall and/or in boys..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Linear Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MEHHP and Hb: -0.69 (-1.16, -0.22). Significant association between phthalate metabolite and decreased hemoglobin levels in the third trimester. Association significant in boys, and in other trimesters overall. Significant only in boys in the 2nd trimester..	Zhu et. al 2018 4829283 Medium
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Linear Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MEOHP and Hb: -0.80 (-1.34, -0.26). Significant association between phthalate metabolite and decreased hemoglobin levels in the third trimester. Association significant in boys, and in other trimesters overall and in both sexes. Significant only overall and in boys in other trimesters..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with female fetus' from Ma'anshan Birth Cohort (n = 1596). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Linear Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MEHP and Hb: -0.90 (-1.27, -0.54). Significant association between phthalate metabolite and decreased hemoglobin levels in the third trimester overall and in both sexes. Association significant in other trimesters overall..	Zhu et. al 2018 4829283 Medium
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Logistic Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for MBP and anemia: 1.18 (1.09,1.28). Significant association between phthalate metabolite and increased risk for anemia in the third trimester overall and in both sexes. Significant in other trimesters; in the second trimester significant only in boys..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Logistic Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for MBzP and anemia: 1.09 (1.01,1.16). Significant association between phthalate metabolite and increased risk for anemia in the third trimester overall and in boys. Also significant in the first trimester, overall and in boys..	Zhu et. al 2018 4829283 Medium
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Logistic Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MEHP and anemia: 1.20 (1.10, 1.29). Significant association between phthalate metabolite and increased risk for anemia in the third trimester overall and in both sexes. Also significant in the first trimester, overall and in both sexes..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Logistic Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MEHHP and anemia: 1.27 (1.15, 1.38). Significant association between phthalate metabolite and increased risk for anemia in the third trimester overall and in both sexes. Also significant in other trimesters, in the second trimester only in boys..	Zhu et. al 2018 4829283 Medium
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Logistic Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MEOHP and anemia: 1.30 (1.17, 1.44). Significant association between phthalate metabolite and increased risk for anemia in the third trimester overall and in both sexes. Also significant in other trimesters, in the second trimester only in boys..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Generalized linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MBzP and anemia: 1.08 (1.01, 1.14). Significant association between MBzP and anemia in repeated measures model, where 1 ln unit increase in MBzP increased the risk of anemia in boys. The association was not significant overall or in girls..	Zhu et. al 2018 4829283 Medium

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Activated partial thrombo-plastin time (APTT)	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer-Immune/Hematological-Maternal hematologic parameters in pregnancy: total white blood cell counts (WBC), red blood cell counts (RBC), hemoglobin (Hb), and platelet counts (PLT)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Linear Regression. Confounders adjusted for: gestational age at sample collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron and folate supplementation during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: continuous. APTT (seconds) beta (95% CI) =0.211 (0.085, 0.338); p-FDR=0.0088. Significant positive associations were reported for ln-transformed MBP with APTT, including after FDR adjustment and after excluding several pregnancy complications..	Jiang et. al 2018 4728517 Medium
hemoglobin (Hb)	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Linear Regression. Confounders adjusted for: gestational age at sample collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron supplementation during pregnancy, infant sex.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Hb (g/L) beta (95% CI) = -0.530 (-0.922, -0.138), p-FDR =0.0216. Ln-MEHP was negatively associated with Hb, including after FDR adjustment and after excluding several pregnancy complications..	Jiang et. al 2018 4728517 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
hemoglobin (Hb)	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Linear Regression. Confounders adjusted for: gestational age at sample collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron supplementation during pregnancy, infant sex.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Hb (g/L) beta (95% CI) = -0.947 (-1.611, -0.282), p-FDR =0. 0053. Ln-MEOHP was negatively associated with Hb, including after FDR adjustment and after excluding several pregnancy complications..	Jiang et. al 2018 4728517 Medium
hemoglobin (Hb)	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Linear Regression. Confounders adjusted for: gestational age at sample collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron supplementation during pregnancy, infant sex.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Hb (g/L) beta (95% CI) = -1.048 (-1.737, -0.360), p-FDR =0. 0029. Ln-MECPP was negatively associated with Hb, including after FDR adjustment and after excluding several pregnancy complications..	Jiang et. al 2018 4728517 Medium
Anemia	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Logistic Regression. Confounders adjusted for: gestational age at samples collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron and folate supplementation during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for ln-MEHP and odds of anemia = 1.25 (1.12, 1.39), p-FDR $<$ 0.0001. MEHP was positively and significantly associated with anemia in the third trimester..	Jiang et. al 2018 4728517 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Anemia	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Logistic Regression. Confounders adjusted for: gestational age at samples collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron and folate supplementation during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for ln-MEOHP and odds of anemia = 1.22 (1.03, 1.46, p-FDR=1.45. MEOHP was positively and significantly associated with anemia in the third trimester..	Jiang et. al 2018 4728517 Medium
Anemia	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Logistic Regression. Confounders adjusted for: gestational age at samples collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron and folate supplementation during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for ln-MECPP and odds of anemia = 1.22 (1.03, 1.46), p-FDR=0.033. MECPP was positively and significantly associated with anemia in the third trimester..	Jiang et. al 2018 4728517 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Forced vital capacity (FVC)	Health Effect: Lung/Respiratory-Spirometry (FEV1, FVC, FEV1/FVC, FEF25-75)-Non-cancer. Outcome measure: Spirometer administered by trained technician	General public. Adults (18+), Older Adults (65+). South Korea; Seoul. Female, Male. Cohort (Prospective). PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition), Lifestyle Activities (ex. exercise, smoking), Sociodemographic Status (ex. race/ethnicity, socioeconomic), Other Chemical and Non-chemical stressors (ex. exposure to other substances that affect same organ as test chemical). Lifestage PESS: Older adults (age >= 65 years). South Korean residents from 2 elderly welfare centers aged 60+ (Enrolled n=559; Used in analysis n=537). 2012-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via biomonitoring at each survey along with spirometry.	Linear mixed model. Confounders adjusted for: age, sex, monthly household income, educational level, active smoking status, pack-years of smoking, passive smoking status, alcohol consumption, physical activity, comorbidity status, height, weight.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) continuous exposure: -0.02 (-0.03, -0.001). Significant negative association reported of FVC with doubling of exposure. Negative association reported for annual function with doubling of exposure but not significant..	Kim et. al 2018 4728477 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Forced expiratory volume in 1 s (FEV)	Health Effect: Lung/Respiratory-Spirometry (FEV1, FVC, FEV1/FVC, FEF25-75)-Non-cancer. Outcome measure: Spirometer administered by trained technician	General public. Adults (18+), Older Adults (65+). South Korea; Seoul. Female, Male. Cohort (Prospective). PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition), Lifestyle Activities (ex. exercise, smoking), Sociodemographic Status (ex. race/ethnicity, socioeconomic), Other Chemical and Non-chemical stressors (ex. exposure to other substances that affect same organ as test chemical). Lifestage PESS: Older adults (age >= 65 years). South Korean residents from 2 elderly welfare centers aged 60+ (Enrolled n=559; Used in analysis n=537). 2012-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via biomonitoring at each survey along with spirometry.	Linear mixed model. Confounders adjusted for: age, sex, monthly household income, educational level, active smoking status, pack-years of smoking, passive smoking status, alcohol consumption, physical activity, comorbidity status, height, weight.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) continuous exposure: -0.02 (-0.03, -0.01). Significant negative association reported of FEV with doubling of exposure. Negative association reported for annual function with doubling of exposure but not significant..	Kim et. al 2018 4728477 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Forced vital capacity (FVC)	Health Effect: Lung/Respiratory-Spirometry (FEV1, FVC, FEV1/FVC, FEF25-75)-Non-cancer. Outcome measure: Spirometer administered by trained technician	General public. Adults (18+), Older Adults (65+). South Korea; Seoul. Female, Male. Cohort (Prospective). PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition), Lifestyle Activities (ex. exercise, smoking), Sociodemographic Status (ex. race/ethnicity, socioeconomic), Other Chemical and Non-chemical stressors (ex. exposure to other substances that affect same organ as test chemical). Lifestage PESS: Older adults (age >= 65 years). South Korean residents from 2 elderly welfare centers aged 60+ (Enrolled n=559; Used in analysis n=537). 2012-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via biomonitoring at each survey along with spirometry.	Linear mixed model. Confounders adjusted for: age, sex, monthly household income, educational level, active smoking status, pack-years of smoking, passive smoking status, alcohol consumption, physical activity, comorbidity status, height, weight.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) continuous exposure: -0.02 (-0.03, -0.004). Significant negative association reported of FVC with doubling of exposure. Negative association reported for annual function with doubling of exposure but not significant..	Kim et. al 2018 4728477 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Forced expiratory volume in 1 s (FEV)	Health Effect: Lung/Respiratory-Spirometry (FEV1, FVC, FEV1/FVC, FEF25-75)-Non-cancer. Outcome measure: Spirometer administered by trained technician	General public. Adults (18+), Older Adults (65+). South Korea; Seoul. Female, Male. Cohort (Prospective). PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition), Lifestyle Activities (ex. exercise, smoking), Sociodemographic Status (ex. race/ethnicity, socioeconomic), Other Chemical and Non-chemical stressors (ex. exposure to other substances that affect same organ as test chemical). Lifestage PESS: Older adults (age >= 65 years). South Korean residents from 2 elderly welfare centers aged 60+ (Enrolled n=559; Used in analysis n=537). 2012-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via biomonitoring at each survey along with spirometry.	Linear mixed model. Confounders adjusted for: age, sex, monthly household income, educational level, active smoking status, pack-years of smoking, passive smoking status, alcohol consumption, physical activity, comorbidity status, height, weight.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) continuous exposure: -0.01 (-0.03, -0.003). Significant negative association reported of FEV with doubling of exposure. Negative association reported for annual function with doubling of exposure but not significant..	Kim et. al 2018 4728477 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Forced vital capacity (FVC)	Health Effect: Lung/Respiratory-Spirometry (FEV1, FVC, FEV1/FVC, FEF25-75)-Non-cancer. Outcome measure: Spirometer administered by trained technician	General public. Adults (18+), Older Adults (65+). South Korea; Seoul. Female, Male. Cohort (Prospective). PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition), Lifestyle Activities (ex. exercise, smoking), Sociodemographic Status (ex. race/ethnicity, socioeconomic), Other Chemical and Non-chemical stressors (ex. exposure to other substances that affect same organ as test chemical). Lifestage PESS: Older adults (age >= 65 years). South Korean residents from 2 elderly welfare centers aged 60+ (Enrolled n=559; Used in analysis n=537). 2012-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via biomonitoring at each survey along with spirometry.	Linear mixed model. Confounders adjusted for: age, sex, monthly household income, educational level, active smoking status, pack-years of smoking, passive smoking status, alcohol consumption, physical activity, comorbidity status, height, weight.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) continuous exposure: -0.02 (-0.03, -0.001). Significant negative association reported of FVC with doubling of exposure. Negative association reported for annual function with doubling of exposure but not significant..	Kim et. al 2018 4728477 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Peak expiratory flow rate (PEFR)	Health Effect: Lung/Respiratory-Peak Flow: PEFR-Non-cancer. Outcome measure: Peak flow meter	General public, Patients in clinics. Middle childhood (6-11), Teens (12-17). Korean; Seoul Metropolitan Area. Female, Male. Cohort (Prospective). PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition). Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 56 asthmatic children and adolescents (ages 6 to 16) living in Seoul Metropolitan Area, Korea. Enrolled and followed from between October 2013 and February 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Ingestion Unclear Repeated measures of exposure on the day of outcome ascertainment.	Linear mixed model. Confounders adjusted for: age, sex, BMI, ambient PM10, outdoor temperature, relative humidity, urinary cotinine level, and controller medication use.	Lowest exposure concentration for a significant adverse health outcome response: continuous. PEFR with 1-day lag for MEOHPLME Regression coefficients: -10.80 95% confidence interval: (-21.32, -0.29)P < 0.05. Negative associations were found between the metabolite and PEFR for 0-, 1-, and 2-day lags. Only the model for a 1-day lag was significant..	Kim et. al 2018 5043508 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Peak expiratory flow rate (PEFR)	Health Effect: Lung/Respiratory-Fractional exhaled nitric oxide-Non-cancer. Outcome measure: Peak flow meter	General public, Patients in clinics. Middle childhood (6-11), Teens (12-17). Korean; Seoul Metropolitan Area. Female, Male. Cohort (Prospective). PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition). Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 56 asthmatic children and adolescents (ages 6 to 16) living in Seoul Metropolitan Area, Korea. Enrolled and followed from between October 2013 and February 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Ingestion Unclear Repeated measures of exposure on the day of outcome ascertainment.	Linear mixed model. Confounders adjusted for: age, sex, BMI, ambient PM10, outdoor temperature, relative humidity, urinary cotinine level, and controller medication use.	Lowest exposure concentration for a significant adverse health outcome response: continuous. FeNO for MEOHPLME Regression coefficients: 17.93 95% Confidence interval: (5.86, 30.01)P < 0.05. Significant positive associations were found for all three phthatates and FeNO..	Kim et. al 2018 5043508 Low
Metabolic syndrome (MetS)	Health Effect: Cardiovascular-Metabolic syndrome (MetS)-Non-cancer. Outcome measure: Operational definition: current BP medication use, current anti-diabetic medication use, and body mass index (BMI) >30	General public. Adults (18+), Older Adults (65+). South Korea. Female, Male. Cross-Sectional. PESS: Other Chemical and Non-chemical stressors (ex. exposure to other substances that affect same organ as test chemical). 5251 general population adults in South Korea. Korean National Environmental Health Survey II (KNEHS). 2012-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring concurrent with outcome assessment.	Logistic Regression. Confounders adjusted for: creatinine.	Lowest exposure concentration for a significant adverse health outcome response: quartile 2. OR (95% CI) for Q2 vs. Q1: 1.632 (1.231 - 2.166); Q3 vs. Q1: 1.966 (1.494–2.587); Q4 vs. Q1: 2.534 (1.942–3.305). Statistically significant positive associations were reported for all quartiles but only in the models that were adjusted only for creatinine and not the models that adjusted for other potential confounders. Results for the other models were positive but not statistically significant..	Shim et. al 2019 5114010 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MBP and Hb: -0.55 (-0.74, -0.35). Significant inverse relationship in repeated measures model, where 1 ln unit increase in MBP was associated with a decrease in maternal hemoglobin. The magnitude of association was stronger in boys..	Zhu et. al 2018 4829283 Medium
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MBzP and Hb: -0.19 (-0.33, -0.05). Significant inverse relationship in repeated measures model, where 1 ln unit increase in MBzP was associated with a decrease in maternal hemoglobin. The magnitude of association was stronger in boys, non-significant in girls..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MEHP and Hb: -0.57 (-0.77, -0.37). Significant inverse relationship in repeated measures model, where 1 ln unit increase in MEHP was associated with a decrease in maternal hemoglobin. The magnitude of association was stronger in boys..	Zhu et. al 2018 4829283 Medium
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MEHHP and Hb: -0.54 (-0.77, -0.30). Significant inverse relationship in repeated measures model, where 1 ln unit increase in MEHHP was associated with a decrease in maternal hemoglobin. The magnitude of association was stronger in boys, non-significant in girls..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MEOHP and Hb: -0.49 (-0.75, -0.23). Significant inverse relationship in repeated measures model, where 1 ln unit increase in MEOHP was associated with a decrease in maternal hemoglobin. The magnitude of association was stronger in boys, non-significant in girls..	Zhu et. al 2018 4829283 Medium
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Generalized linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MBP and anemia: 1.21 (1.15, 1.27). Significant association between MBP and anemia in repeated measures model, where 1 ln unit increase in MBP increased the risk of anemia. The magnitude of association was stronger in boys..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Generalized linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MEHP and anemia: 1.20 (1.14, 1.26). Significant association between MEHP and anemia in repeated measures model, where higher MEHP increased the odds of anemia. The magnitude of association was stronger in boys..	Zhu et. al 2018 4829283 Medium
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Generalized linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MEHHP and anemia: 1.16 (1.09, 1.22). Significant association between MEHHP and anemia in repeated measures model, where exposure to MEHHP increased the odds of anemia. The magnitude of association was stronger in boys..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Generalized linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MEOHP and anemia: 1.13 (1.05, 1.20). Significant association between MEOHP and anemia in repeated measures model, where exposure to MEOHP increased the odds of anemia. The magnitude of association was stronger in boys..	Zhu et. al 2018 4829283 Medium
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Linear Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MBP and Hb: -1.04 (-1.41, -0.66). Significant association between phthalate metabolite and decreased hemoglobin levels in the third trimester. Associations significant in the first trimester, and in both sexes..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Linear Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MBzP and Hb: -0.35 (-0.65, -0.06). Significant association between phthalate metabolite and decreased hemoglobin levels in the third trimester. Association significant in boys, and in the second trimester..	Zhu et. al 2018 4829283 Medium
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Linear Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MEHP and Hb: -0.90 (-1.27, -0.54). Significant association between phthalate metabolite and decreased hemoglobin levels in the third trimester. Association significant in both sexes, and in other trimesters overall and/or in boys..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Linear Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MEHHP and Hb: -0.69 (-1.16, -0.22). Significant association between phthalate metabolite and decreased hemoglobin levels in the third trimester. Association significant in boys, and in other trimesters overall. Significant only in boys in the 2nd trimester..	Zhu et. al 2018 4829283 Medium
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Linear Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MEOHP and Hb: -0.80 (-1.34, -0.26). Significant association between phthalate metabolite and decreased hemoglobin levels in the third trimester. Association significant in boys, and in other trimesters overall and in both sexes. Significant only overall and in boys in other trimesters..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with female fetus' from Ma'anshan Birth Cohort (n = 1596). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Linear Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MEHP and Hb: -0.90 (-1.27, -0.54). Significant association between phthalate metabolite and decreased hemoglobin levels in the third trimester overall and in both sexes. Association significant in other trimesters overall..	Zhu et. al 2018 4829283 Medium
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Logistic Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for MBP and anemia: 1.18 (1.09,1.28). Significant association between phthalate metabolite and increased risk for anemia in the third trimester overall and in both sexes. Significant in other trimesters; in the second trimester significant only in boys..	Zhu et. al 2018 4829283 Medium

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Diethylhexyl Phthalate . . . continued from previous page Metabolite: Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP)

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Logistic Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for MBzP and anemia: 1.09 (1.01,1.16). Significant association between phthalate metabolite and increased risk for anemia in the third trimester overall and in boys. Also significant in the first trimester, overall and in boys..	Zhu et. al 2018 4829283 Medium
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Logistic Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MEHP and anemia: 1.20 (1.10, 1.29). Significant association between phthalate metabolite and increased risk for anemia in the third trimester overall and in both sexes. Also significant in the first trimester, overall and in both sexes..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Logistic Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MEHHP and anemia: 1.27 (1.15, 1.38). Significant association between phthalate metabolite and increased risk for anemia in the third trimester overall and in both sexes. Also significant in other trimesters, in the second trimester only in boys..	Zhu et. al 2018 4829283 Medium
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Logistic Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MEOHP and anemia: 1.30 (1.17, 1.44). Significant association between phthalate metabolite and increased risk for anemia in the third trimester overall and in both sexes. Also significant in other trimesters, in the second trimester only in boys..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Generalized linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MBzP and anemia: 1.08 (1.01, 1.14). Significant association between MBzP and anemia in repeated measures model, where 1 ln unit increase in MBzP increased the risk of anemia in boys. The association was not significant overall or in girls..	Zhu et. al 2018 4829283 Medium

Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Low-HDL cholesterol	Health Effect: Cardiovascular-Blood pressure, HDL cholesterol, triglycerides-Non-cancer. Outcome measure: Direct measurement	General public. Middle childhood (6-11), Teens (12-17). Iran; Isfahan. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Children and adolescents aged 6-18 living in the city of Isfahan, Iran (n=242). NR.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured concurrently with outcome.	Logistic Regression. Confounders adjusted for: age, physical activity, use of cosmetics, use of plastic packaging, use of bottled drinks, waist circumference, fasting blood sugar, total cholesterol, BMI, HDL-C, LDL-C, SBP, DBP.	Lowest exposure concentration for a significant adverse health outcome response: Tertiles [specific tertile ranges not provided; geometric mean (SD) MEOHP = 178.72 (143.07) ug/L]. OR (95%) for low-HDL Cholesterol for T2 vs. T1 of MEOHP = 3.63 (1.21, 10.89). Positive significant association between MEOHP and low-HDL cholesterol for T2 vs. T1. T3 vs. T1 positive but not significant. p-trend = 0.06.	Amin et. al 2018 4829277 Low
Obesity	Health Effect: Reproductive/Developmental-Body mass index-Non-cancer-Nutritional/Metabolic-Body mass index, fasting blood sugar-Non-cancer. Outcome measure: Direct measurement	General public. Middle childhood (6-11), Teens (12-17). Iran; Isfahan. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Children and adolescents aged 6-18 living in the city of Isfahan, Iran (n=242). NR.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured concurrently with outcome.	Logistic Regression. Confounders adjusted for: age, physical activity, use of cosmetics, use of plastic packaging, use of bottled drinks, waist circumference, fasting blood sugar, total cholesterol, triglycerides, HDL-C, LDL-C, SBP, DBP.	Lowest exposure concentration for a significant adverse health outcome response: Tertiles [specific tertile ranges not provided; geometric mean (SD) MBzP = 173.18 (196.35) ug/L]. OR (95%) for obesity for T3 vs. T1 of MBzP = 5.54 (4.79, 6.28). Positive significant association between MBzP and obesity for T3 vs. T1. T2 vs. T1 positive but not significant. p-trend = 0.001.	Amin et. al 2018 4829277 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Low-HDL cholesterol	Health Effect: Cardiovascular-Blood pressure, HDL cholesterol, triglycerides-Non-cancer. Outcome measure: Direct measurement	General public. Middle childhood (6-11), Teens (12-17). Iran; Isfahan. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Children and adolescents aged 6-18 living in the city of Isfahan, Iran (n=242). NR.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured concurrently with outcome.	Logistic Regression. Confounders adjusted for: age, physical activity, use of cosmetics, use of plastic packaging, use of bottled drinks, waist circumference, fasting blood sugar, total cholesterol, triglycerides, BMI, LDL-C, SBP, DBP.	Lowest exposure concentration for a significant adverse health outcome response: Tertiles [specific tertile ranges not provided; geometric mean (SD) MBzP = 173.18 (196.35) ug/L]. OR (95%) for low-HDL cholesterol for T3 vs. T1 of MBzP = 0.31 (0.09, 0.95). Negative significant association between MBzP and low-HDL cholesterol for T3 vs. T1. T2 vs. T1 negative but not significant. p-trend = 0.12.	Amin et. al 2018 4829277 Low
High triglycerides	Health Effect: Cardiovascular-Blood pressure, HDL cholesterol, triglycerides-Non-cancer. Outcome measure: Direct measurement	General public. Middle childhood (6-11), Teens (12-17). Iran; Isfahan. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Children and adolescents aged 6-18 living in the city of Isfahan, Iran (n=242). NR.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured concurrently with outcome.	Logistic Regression. Confounders adjusted for: age, physical activity, use of cosmetics, use of plastic packaging, use of bottled drinks, waist circumference, fasting blood sugar, total cholesterol, HDL-C, BMI, LDL-C, SBP, DBP.	Lowest exposure concentration for a significant adverse health outcome response: Tertiles [specific tertile ranges not provided; geometric mean (SD) MBzP = 173.18 (196.35) ug/L]. OR (95%) for high triglycerides for T3 vs. T1 of MBzP = 2.71 (1.23, 6.22). Positive significant association between MBzP and high triglycerides for T3 vs. T1. T2 vs. T1 positive but not significant. p-trend = 0.03.	Amin et. al 2018 4829277 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Low-HDL cholesterol	Health Effect: Cardiovascular-Blood pressure, HDL cholesterol, triglycerides-Non-cancer. Outcome measure: Direct measurement	General public. Middle childhood (6-11), Teens (12-17). Iran; Isfahan. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Children and adolescents aged 6-18 living in the city of Isfahan, Iran (n=242). NR.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured concurrently with outcome.	Logistic Regression. Confounders adjusted for: age, physical activity, use of cosmetics, use of plastic packaging, use of bottled drinks, waist circumference, fasting blood sugar, total cholesterol, triglycerides, BMI, LDL-C, SBP, DBP.	Lowest exposure concentration for a significant adverse health outcome response: Tertiles [specific tertile ranges not provided; geometric mean (SD) MBP = 165.26 (159.14) ug/L]. OR (95%) for low-HDL cholesterol for T3 vs. T1 of MBP = 0.27 (0.08, 0.87). Negative significant association between MBP and low-HDL cholesterol for T3 vs. T1. T2 vs. T1 negative but not significant. p-trend = 0.186.	Amin et. al 2018 4829277 Low
Obesity	Health Effect: Reproductive/Developmental-Body mass index-Non-cancer-Nutritional/Metabolic-Body mass index, fasting blood sugar-Non-cancer. Outcome measure: Direct measurement	General public. Middle childhood (6-11), Teens (12-17). Iran; Isfahan. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Children and adolescents aged 6-18 living in the city of Isfahan, Iran (n=242). NR.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured concurrently with outcome.	Logistic Regression. Confounders adjusted for: age, physical activity, use of cosmetics, use of plastic packaging, use of bottled drinks, waist circumference, fasting blood sugar, total cholesterol, triglycerides, HDL-C, LDL-C, SBP, DBP.	Lowest exposure concentration for a significant adverse health outcome response: Tertiles [specific tertile ranges not provided; geometric mean (SD) MEHHP = 114.20 (147.29) ug/L]. OR (95%) for obesity for T3 vs. T1 of MEHHP = 4.16 (3.31, 5.01). Positive significant association between MEHHP and obesity for T3 vs. T1. T2 vs. T1 positive but not significant. p-trend = 0.001.	Amin et. al 2018 4829277 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Obesity	Health Effect: Reproductive/Developmental-Body mass index-Non-cancer-Nutritional/Metabolic-Body mass index, fasting blood sugar-Non-cancer. Outcome measure: Direct measurement	General public. Middle childhood (6-11), Teens (12-17). Iran; Isfahan. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Children and adolescents aged 6-18 living in the city of Isfahan, Iran (n=242). NR.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured concurrently with outcome.	Logistic Regression. Confounders adjusted for: age, physical activity, use of cosmetics, use of plastic packaging, use of bottled drinks, waist circumference, fasting blood sugar, total cholesterol, triglycerides, HDL-C, LDL-C, SBP, DBP.	Lowest exposure concentration for a significant adverse health outcome response: Tertiles [specific tertile ranges not provided; geometric mean (SD) MEHP = 78.60 (43.80) ug/L]. OR (95%) for obesity for T3 vs. T1 of MEHP = 3.63 (2.95, 4.31). Positive significant association between MEHP and obesity for T3 vs. T1. T2 vs. T1 positive but not significant. p-trend = 0.001.	Amin et. al 2018 4829277 Low
High triglycerides	Health Effect: Cardiovascular-Blood pressure, HDL cholesterol, triglycerides-Non-cancer. Outcome measure: Direct measurement	General public. Middle childhood (6-11), Teens (12-17). Iran; Isfahan. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Children and adolescents aged 6-18 living in the city of Isfahan, Iran (n=242). NR.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured concurrently with outcome.	Logistic Regression. Confounders adjusted for: age, physical activity, use of cosmetics, use of plastic packaging, use of bottled drinks, waist circumference, fasting blood sugar, total cholesterol, BMI, HDL-C, LDL-C, SBP, DBP.	Lowest exposure concentration for a significant adverse health outcome response: Tertiles [specific tertile ranges not provided; geometric mean (SD) MEHP = 78.60 (43.80) ug/L]. OR (95%) for high triglycerides for T3 vs. T1 of MEHP =3.57 (1.55, 8.21). Positive significant association between MEHP and high triglycerides for T3 vs. T1. T2 vs. T1 positive but not significant. p-trend = 0.01.	Amin et. al 2018 4829277 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
BMI z-score and waist circumference	Health Effect: Nutritional/Metabolic-Body mass index (BMI), waist circumference-Non-cancer-Reproductive/Developmental-Body mass index (BMI), waist circumference-Non-cancer. Outcome measure: Weight, height, and waist circumference measured during physical examination	General public. Middle childhood (6-11), Teens (12-17), Adults (18+). Iran; Isfahan. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Children and adolescents age 6-18 living in Isfahan, Iran (n=242). 2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in fasting morning urine samples after enrollment.	Multivariate Regression. Confounders adjusted for: sex, age, physical activity.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (p-value): MBP and BMI z-score: 0.22 (<0.001)MBP and waist circumference: 0.29 (<0.001). Significant positive associations reported between MBP and both BMI z-score and waist circumference..	Amin et. al 2018 4728682 Low
BMI z-score and waist circumference	Health Effect: Nutritional/Metabolic-Body mass index (BMI), waist circumference-Non-cancer-Reproductive/Developmental-Body mass index (BMI), waist circumference-Non-cancer. Outcome measure: Weight, height, and waist circumference measured during physical examination	General public. Middle childhood (6-11), Teens (12-17), Adults (18+). Iran; Isfahan. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Children and adolescents age 6-18 living in Isfahan, Iran (n=242). 2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in fasting morning urine samples after enrollment.	Multivariate Regression. Confounders adjusted for: sex, age, physical activity.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (p-value): MBzP and BMI z-score: 0.18 (0.002)MBzP and waist circumference: 0.22 (<0.001). Significant positive associations reported between MBzP and both BMI z-score and waist circumference..	Amin et. al 2018 4728682 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
BMI z-score and waist circumference	Health Effect: Nutritional/Metabolic-Body mass index (BMI), waist circumference-Non-cancer. Outcome measure: Weight, height, and waist circumference measured during physical examination	General public. Middle childhood (6-11), Teens (12-17), Adults (18+). Iran; Isfahan. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Children and adolescents age 6-18 living in Isfahan, Iran (n=242). 2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in fasting morning urine samples after enrollment.	Multivariate Regression. Confounders adjusted for: sex, age, physical activity.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (p-value): MEHP and BMI z-score: 0.23 (<0.001)MEHP and waist circumference: 0.37 (<0.001)MEOHP and BMI z-score: 0.17 (0.005)MEOHP and waist circumference: 0.19 (0.003)MEHHP and BMI z-score: 0.3 (<0.001)MEHHP and waist circumference: 0.39 (<0.001). Significant positive associations reported between MEHP, MEOHP, and MEHHP and both BMI z-score and waist circumference..	Amin et. al 2018 4728682 Low
Small-for-gestational age	Health Effect: Reproductive/Developmental-Small for gestational age (SGA), Birth weight for gestational age z-scores (Z-BW), Preterm birth (PTB), Low birth weight (LBW)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Infant (0-1), Adults (18+). United States; Charleston, South Carolina metropolitan area. Female, Male. Cohort (Prospective). PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women and their children in South Carolina (n=310; African-American n=152; White n=158). 2011-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy prior to birth outcomes.	Logistic Regression. Confounders adjusted for: maternal age, BMI, education, smoking in pregnancy, race.	Lowest exposure concentration for a significant adverse health outcome response: 2nd Tertile (range not provided). OR (95% CI) for exposure measured during GW 18-22:T2 vs. T1: 0.30 (0.10 - 0.85)T3 vs. T1: 0.29 (0.10 - 0.81)OR (95% CI) for exposure measured during GW 24-32:T2 vs. T1: 0.32 (0.06 - 1.68)T3 vs. T1: 0.29 (0.05 - 1.58). Significant negative associations were reported for all tertiles of MBzP and SGA. Negative, non-consistent associations were observed for all other birth outcomes and no significant findings were reported by race..	Bloom et. al 2019 5494469 High

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Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Birth weight z-scores	Health Effect: Reproductive/Developmental-Small for gestational age (SGA), Birth weight for gestational age z-scores (Z-BW), Preterm birth (PTB), Low birth weight (LBW)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Infant (0-1), Adults (18+). United States; Charleston, South Carolina metropolitan area. Female, Male. Cohort (Prospective). PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women and their children in South Carolina (n=310; African-American n=152; White n=158). 2011-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy prior to birth outcomes.	Logistic Regression. Confounders adjusted for: maternal age, BMI, education, smoking in pregnancy, race.	Lowest exposure concentration for a significant adverse health outcome response: 2nd Tertile (range not provided). Mean change (95% CI) per 1-ln unit increase MiBP during GW 18-22:Continuous: -0.01 (-0.16, 0.15)T2 vs. T1: 0.11 (-0.15, 0.37)T3 vs. T1: -0.02 (-0.29, 0.24)Mean change (95% CI) per 1-ln unit increase MiBP during GW 24-32:Continuous: -0.28 (-0.54, -0.02)T2 vs. T1: -0.35 (-0.66, -0.04)T3 vs. T1: -0.51 (-0.86, -0.17). Significant negative associations were reported for MiBP during GW 24-32 and birth weight z-scores. Non-significant negative associations were reported for MBP and all birth outcomes, , although a significant negative association was reported for the odds of low birth weight in MBP in females only..	Bloom et. al 2019 5494469 High

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Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Small-for-gestational age	Health Effect: Reproductive/Developmental-Small for gestational age (SGA), Birth weight for gestational age z-scores (Z-BW), Preterm birth (PTB), Low birth weight (LBW)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Infant (0-1), Adults (18+). United States; Charleston, South Carolina metropolitan area. Female, Male. Cohort (Prospective). PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women and their children in South Carolina (n=310; African-American n=152; White n=158). 2011-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy prior to birth outcomes.	Logistic Regression. Confounders adjusted for: maternal age, BMI, education, smoking in pregnancy, race.	Lowest exposure concentration for a significant adverse health outcome response: 2nd Tertile (range not provided). OR (95% CI) for MiBP during GW 18-22:Continuous (per 1-ln increase): 1.24 (0.71, 2.16)T2 vs. T1: N/AT3 vs. T1: N/AOR (95% CI) for MiBP during GW 24-32:Continuous: (per 1-ln increase): 2.82 (1.21, 6.56)T2 vs. T1: N/AT3 vs. T1: N/AOR (95% CI) for MiBP during GW 18-22 stratified by sex:Females Continuous (per 1-ln increase): 3.14 (1.54, 6.40)Males Continuous (per 1-ln increase): 0.71 (0.32, 1.56)OR (95% CI) for MiBP during GW 24-32 stratified by sex:Females Continuous (per 1-ln increase): 3.52 (1.23, 10.11)Males Continuous (per 1-ln increase): 3.22 (1.35, 7.66). Significant positive associations were reported for MiBP and SGA. Non-significant negative associations were reported for MBP and all birth outcomes. The tertile model for MiBP did not converge and was not displayed. When stratified by infant sex, MiBP was still significantly positively associated with SGA, although negative in males at GW 18-22..	Bloom et. al 2019 5494469 High

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Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Small-for-gestational age	Health Effect: Reproductive/Developmental-Small for gestational age (SGA), Birth weight for gestational age z-scores (Z-BW), Preterm birth (PTB), Low birth weight (LBW)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Infant (0-1), Adults (18+). United States; Charleston, South Carolina metropolitan area. Female, Male. Cohort (Prospective). PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women and their children in South Carolina (n=310; African-American n=152; White n=158). 2011-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy prior to birth outcomes.	Logistic Regression. Confounders adjusted for: maternal age, BMI, education, smoking in pregnancy, race.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. OR (95% CI) for MEOHP during GW 18-22:Continuous (per 1-ln increase): 0.83 (0.40, 1.69)T2 vs. T1: 1.87 (0.74, 4.76)T3 vs. T1: 0.66 (0.22, 1.94)OR (95% CI) for MEOHP during GW 24-32:Continuous (per 1-ln increase): 2.80 (1.05, 7.42)T2 vs. T1: 2.80 (0.54, 14.61)T3 vs. T1: 2.53 (0.50, 12.75)OR (95% CI) for MEHP during GW 18-22 stratified by race:African-American Continuous (per 1-ln increase): 0.80 (0.36, 1.75)White Continuous (per 1-ln increase): 0.16 (0.03, 0.78)OR (95% CI) for MEHP during GW 24-32 stratified by race:African-American Continuous (per 1-ln increase): 0.71 (0.07, 7.17)White Continuous (per 1-ln increase): 3.26 (0.64, 16.56). MEHP was not significantly associated with birth outcomes except for SGA when stratified by race. In African-American infants, significant negative associations were observed. In white infants, a significant positive association was reported for GW 18-22, but not GW 24-32.A significant positive association was observed for MEOHP during GW 24-32 and SGA. No significant associations were observed for other birth outcomes, other DEHP metabolites, or sum DEHP metabolites..	Bloom et. al 2019 5494469 High

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
CBCL scores for withdrawn, somatic complaints, anxious/depressed, social problems, thought problems, attention problems, delinquent behavior, and aggressive behavior, as well as summary measures of the first 6 (internalizing problems) and the last 2 (externalizing problems)	Health Effect: Neurological/Behavioral-Eight behavior syndromes from the child behavior checklist (CBCL) - withdrawn, somatic complaints, anxious/depressed, social problems, thought problems, attention problems, delinquent behavior, aggressive behavior, and two summary measures derived from these (internalizing problems, externalizing problems) at ages 8, 11 and 14.-Non-cancer-Reproductive/Developmental-Eight behavior syndromes from the child behavior checklist (CBCL) - withdrawn, somatic complaints, anxious/depressed, social problems, thought problems, attention problems, delinquent behavior, aggressive behavior, and two summary measures derived from these (internalizing problems, externalizing problems) at ages 8, 11 and 14.-Non-cancer. Outcome measure: Child Behavior Check List, Chinese version, completed by mothers at 8, 11, and 14 years of age and addressing the 6 months prior to administration date	General public. Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan; central Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Pregnant women in Taiwan (n=430) and their children with follow-up at 8 (n=122), 11 (n=96), and 14 (n=78) years of age. pilot for the Taiwan Maternal and Infant Cohort Study. Dec 2000-Nov 2001.	Biomonitoring Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during 3rd trimester of pregnancy and in children at 8, 11, and 14 years of age.	Linear Regression. Confounders adjusted for: Models stratified by gender adjusted for family income and IQ score. Models including both boys and girls were adjusted for child's gender, family income, and IQ score..	Lowest exposure concentration for a significant adverse health outcome response: continuous. Among boys:At age 8, association between maternal DEHP and somatic complaints (coefficient, (95%CI)): 2.55 (0.29, 4.80)At age 8, association between maternal DEHP and social problems (coefficient (95% CI)): 3.00 (0.27, 5.73)At age 8, association between maternal DEHP and delinquent behavior (coefficient (95% CI)): 4.18 (1.76, 6.59)At age 14, association between maternal DEHP and somatic complaints (coefficient (95% CI)): 3.85 (0.95, 6.75)At age 14, association between maternal DEHP and delinquent behavior (coefficient (95% CI)): 3.52 (0.20, 6.84)At age 14, association between maternal DEHP and internalizing problems (coefficient (95% CI)): 2.53 (0.01, 5.06)Among girls:At age 8, association between maternal DEHP and aggressive behavior (coefficient (95% CI)): 4.16 (1.12, 7.21)At age 8, association between maternal DEHP and externalizing problems (coefficient (95% CI)): 3.81 (1.00, 6.62)At age 11, association between maternal DEHP and anxious/depressed (coefficient (95% CI)): 3.12 (0.13, 6.11)At age 11, association between maternal DEHP and aggressive behavior (coefficient (95% CI)): 2.87 (0.42, 5.32)At age 11, association between maternal DEHP and externalizing problems (coefficient (95% CI)): 2.78 (0.20, 5.37)At age 14, association between maternal DEHP and anxious/depressed (coefficient (95% CI)): 3.94 (0.41, 7.47)At age 14, association between maternal DEHP and delinquent behavior (coefficient (95% CI)): 3.15 (0.42, 5.88)At age 14, association between maternal DEHP and internalizing problems (coefficient (95% CI)): 3.77 (0.00, 7.53)Among boys and girls:At age 8, association between maternal DEHP and social problems (coefficient (95% CI)): 2.28 (0.16, 4.40)At age 8, association between maternal DEHP and delinquent behavior (coefficient (95% CI)): 3.56 (1.81, 5.32)At age 8, association between maternal DEHP and aggressive behavior (coefficient (95% CI)): 3.00 (1.81, 5.32)At age 8, association between maternal DEHP and externalizing problems (coefficient (95% CI)): 3.38 (1.43, 5.33)At age 11, association between maternal DEHP and withdrawn (coefficient (95% CI)): 2.12 (0.18, 4.06)At age 11, association between maternal DEHP and anxious/depressed (coefficient (95% CI)): 2.53 (0.49, 4.57)At age 11, association between maternal DEHP and social problems (coefficient (95% CI)): 3.01 (0.42, 5.60)At age 11, association between maternal DEHP and attention problems (coefficient (95% CI)): 2.13 (0.10, 4.16)At age 11, association	Chen et. al 2019 5499409 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
CBCL scores for withdrawn, somatic complaints, anxious/depressed, social problems, thought problems, attention problems, delinquent behavior, and aggressive behavior, as well as summary measures of the first 6 (internalizing problems) and the last 2 (externalizing problems)	Health Effect: Neurological/Behavioral-Eight behavior syndromes from the child behavior checklist (CBCL) - withdrawn, somatic complaints, anxious/depressed, social problems, thought problems, attention problems, delinquent behavior, aggressive behavior, and two summary measures derived from these (internalizing problems, externalizing problems) at ages 8, 11 and 14.-Non-cancer-Reproductive/Developmental-Eight behavior syndromes from the child behavior checklist (CBCL) - withdrawn, somatic complaints, anxious/depressed, social problems, thought problems, attention problems, delinquent behavior, aggressive behavior, and two summary measures derived from these (internalizing problems, externalizing problems) at ages 8, 11 and 14.-Non-cancer. Outcome measure: Child Behavior Check List, Chinese version, completed by mothers at 8, 11, and 14 years of age and addressing the 6 months prior to administration date	General public. Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan; central Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Pregnant women in Taiwan (n=430) and their children with follow-up at 8 (n=122), 11 (n=96), and 14 (n=78) years of age. pilot for the Taiwan Maternal and Infant Cohort Study. Dec 2000-Nov 2001.	Biomonitoring Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during 3rd trimester of pregnancy and in children at 8, 11, and 14 years of age.	Linear Regression. Confounders adjusted for: Models stratified by gender adjusted for family income and IQ score. Models including both boys and girls were adjusted for child's gender, family income, and IQ score..	Lowest exposure concentration for a significant adverse health outcome response: continuous. Among boys:At age 8, association between maternal DEHP and somatic complaints (coefficient, (95%CI)): 2.55 (0.29, 4.80)At age 8, association between maternal DEHP and social problems (coefficient (95% CI)): 3.00 (0.27, 5.73)At age 8, association between maternal DEHP and delinquent behavior (coefficient (95% CI)): 4.18 (1.76, 6.59)At age 14, association between maternal DEHP and somatic complaints (coefficient (95% CI)): 3.85 (0.95, 6.75)At age 14, association between maternal DEHP and delinquent behavior (coefficient (95% CI)): 3.52 (0.20, 6.84)At age 14, association between maternal DEHP and internalizing problems (coefficient (95% CI)): 2.53 (0.01, 5.06)Among girls:At age 8, association between maternal DEHP and aggressive behavior (coefficient (95% CI)): 4.16 (1.12, 7.21)At age 8, association between maternal DEHP and externalizing problems (coefficient (95% CI)): 3.81 (1.00, 6.62)At age 11, association between maternal DEHP and anxious/depressed (coefficient (95% CI)): 3.12 (0.13, 6.11)At age 11, association between maternal DEHP and aggressive behavior (coefficient (95% CI)): 2.87 (0.42, 5.32)At age 11, association between maternal DEHP and externalizing problems (coefficient (95% CI)): 2.78 (0.20, 5.37)At age 14, association between maternal DEHP and anxious/depressed (coefficient (95% CI)): 3.94 (0.41, 7.47)At age 14, association between maternal DEHP and delinquent behavior (coefficient (95% CI)): 3.15 (0.42, 5.88)At age 14, association between maternal DEHP and internalizing problems (coefficient (95% CI)): 3.77 (0.00, 7.53)Among boys and girls:At age 8, association between maternal DEHP and social problems (coefficient (95% CI)): 2.28 (0.16, 4.40)At age 8, association between maternal DEHP and delinquent behavior (coefficient (95% CI)): 3.56 (1.81, 5.32)At age 8, association between maternal DEHP and aggressive behavior (coefficient (95% CI)): 3.00 (1.81, 5.32)At age 8, association between maternal DEHP and externalizing problems (coefficient (95% CI)): 3.38 (1.43, 5.33)At age 11, association between maternal DEHP and withdrawn (coefficient (95% CI)): 2.12 (0.18, 4.06)At age 11, association between maternal DEHP and anxious/depressed (coefficient (95% CI)): 2.53 (0.49, 4.57)At age 11, association between maternal DEHP and social problems (coefficient (95% CI)): 3.01 (0.42, 5.60)At age 11, association between maternal DEHP and attention problems (coefficient (95% CI)): 2.13 (0.10, 4.16)At age 11, association	Chen et. al 2019 5499409 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
fasting glucose, fasting insulin, HbA1c, HOMA-IR, HOMA-beta	Health Effect: Nutritional/Metabolic- Measures of glucose and insulin metabolism among individuals without diagnosed diabetes: fasting glucose, fasting insulin, glycated hemoglobin (HbA1c), homeostasis model assessment for insulin resistance (HOMA-IR), homeostasis model assessment for beta cell function (HOMA-β)- Non-cancer. Outcome measure: Fasting serum samples	General public. Teens (12-17), Adults (18+), Older Adults (65+). Canada. Female, Male. Cross-Sectional. PESS: . 2,119 participants between 12 and 79 years old without self-reported diagnosed diabetes. Canadian Health Measures Survey (CHMS), cycle 2 (2009–2011). 2009–2011.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure and outcome measured concurrently.	Linear Regression. Confounders adjusted for: age, sex, ethnicity, urinary creatinine, cigarette smoking, alcohol use, and physical exercise.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta (95% CI) per 1 IQR increase:-MEHHP: HbA1c % = 0.03 (0.00, 0.06); glucose (mmol/L) 0.04 (0.01, 0.08); HOMA-IR =0.15 (0.05, 0.26); HOMA-beta % = 7.30 (1.23, 13.36). -MEHPP: HbA1c % = 0.04 (0.01, 0.08); HOMA-beta % = 10.55 (3.72, 17.38).-MEOHP: HOMA-IR = 0.15 (0.05, 0.26); HOMA-beta % =10.87 (4.92, 16.82) -Sum DEHP: HbA1c % =0.04 (0.01, 0.07); glucose (mmol/L) 0.04 (0.00, 0.08); HOMA-IR =0.15 (0.04, 0.26); HOMA-beta % = 10.24 (3.71, 16.77); insulin (pmol/L) = 0.63 (0.21, 1.05).. The sum of DEHP metabolites was associated with significant increases in fasting glucose, HbA1c (an indicator of long-term glucose control), and HOMA-IR (an indicator of insulin resistance), as well as a higher level of fasting insulin, and higher HOMA-beta (an indicator of beta-cell function)..	Dales et. al 2018 4728651 Medium
fasting glucose, fasting insulin, HbA1c, HOMA-IR, HOMA-beta	Health Effect: Nutritional/Metabolic- Measures of glucose and insulin metabolism among individuals without diagnosed diabetes: fasting glucose, fasting insulin, glycated hemoglobin (HbA1c), homeostasis model assessment for insulin resistance (HOMA-IR), homeostasis model assessment for beta cell function (HOMA-β)- Non-cancer. Outcome measure: Fasting serum samples	General public. Teens (12-17), Adults (18+), Older Adults (65+). Canada. Female, Male. Cross-Sectional. PESS: . 2,119 participants between 12 and 79 years old without self-reported diagnosed diabetes. Canadian Health Measures Survey (CHMS), cycle 2 (2009–2011). 2009–2011.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure and outcome measured concurrently.	Linear Regression. Confounders adjusted for: age, sex, ethnicity, urinary creatinine, cigarette smoking, alcohol use, and physical exercise.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta (95% CI) per 1 IQR increase MnBP for HOMA-beta % = 7.30 (1.23, 13.36).. Urinary MnBP was associated with a significant increase HOMA-beta % (an indicator of beta-cell function)..	Dales et. al 2018 4728651 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
fasting glucose, fasting insulin, HbA1c, HOMA-IR, HOMA-beta	Health Effect: Nutritional/Metabolic- Measures of glucose and insulin metabolism among individuals without diagnosed diabetes: fasting glucose, fasting insulin, glycated hemoglobin (HbA1c), homeostasis model assessment for insulin resistance (HOMA-IR), homeostasis model assessment for beta cell function (HOMA-β)- Non-cancer. Outcome measure: Fasting serum samples	General public. Teens (12-17), Adults (18+), Older Adults (65+). Canada. Female, Male. Cross-Sectional. PESS: . 2,119 participants between 12 and 79 years old without self-reported diagnosed diabetes. Canadian Health Measures Survey (CHMS), cycle 2 (2009–2011). 2009–2011.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure and outcome measured concurrently.	Linear Regression. Confounders adjusted for: age, sex, ethnicity, urinary creatinine, cigarette smoking, alcohol use, and physical exercise.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta (95% CI) per 1 IQR increase MBzP for fasting glucose = 0.03(0.02, 0.05).. Urinary MBzP was associated with a significant increase fasting glucose..	Dales et. al 2018 4728651 Medium
fasting glucose, fasting insulin, HbA1c, HOMA-IR, HOMA-beta	Health Effect: Nutritional/Metabolic- Measures of glucose and insulin metabolism among individuals without diagnosed diabetes: fasting glucose, fasting insulin, glycated hemoglobin (HbA1c), homeostasis model assessment for insulin resistance (HOMA-IR), homeostasis model assessment for beta cell function (HOMA-β)- Non-cancer. Outcome measure: Fasting serum samples	General public. Teens (12-17), Adults (18+), Older Adults (65+). Canada. Female, Male. Cross-Sectional. PESS: . 2,119 participants between 12 and 79 years old without self-reported diagnosed diabetes. Canadian Health Measures Survey (CHMS), cycle 2 (2009–2011). 2009–2011.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure and outcome measured concurrently.	Linear Regression. Confounders adjusted for: age, sex, ethnicity, urinary creatinine, cigarette smoking, alcohol use, and physical exercise.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta (95% CI) per 1 IQR increase MiBP for fasting glucose = 0.04 (0.02, 0.06). Urinary MiBP was associated with a significant increase fasting glucose..	Dales et. al 2018 4728651 Medium

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Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Birth outcomes (birth length, birth weight, gestational age)	Health Effect: Reproductive/Developmental-birth length, birth weight, gestational age-Non-cancer. Outcome measure: Not specified	General public, Pregnant people. Infant (0-1), Adults (18+). China; Wuhan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Mother-infant pairs in Wuhan, China (n=997 eligible, n=799 with urine sample, n=115 with DNA methylation measured in cord blood, n=106 with sufficient urine volume and used in analysis). Recruitment during late pregnancy: 2011-2012; Follow-up: through delivery.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured when women presented to the clinic for delivery.	Generalized Additive Model (GAM). Confounders adjusted for: age, pre-pregnancy BMI, marital status, passive smoking, infant sex, creatinine, gestational age (birth length and birth weight models only).	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficients (95% CI) for MBzP:Gestational age, all participants: 0.16 (0.03, 0.29)Gestational age, boys: 0.22 (0.04, 0.41)Birth length, boys: 0.15 (0.01, 0.28). Significant positive associations between MBzP and gestational age among all participants and among boys only. Significant positive association between MBzP and birth length in boys only. No significant associations in girls or with birth weight outcome..	Huang et. al 2018 4728501 Low

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Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Birth outcomes (birth length, birth weight, gestational age)	Health Effect: Reproductive/Developmental-birth length, birth weight, gestational age-Non-cancer. Outcome measure: Not specified	General public, Pregnant people. Infant (0-1), Adults (18+). China; Wuhan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Mother-infant pairs in Wuhan, China (n=997 eligible, n=799 with urine sample, n=115 with DNA methylation measured in cord blood, n=106 with sufficient urine volume and used in analysis). Recruitment during late pregnancy: 2011-2012; Follow-up: through delivery.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured when women presented to the clinic for delivery.	Generalized Additive Model (GAM). Confounders adjusted for: age, pre-pregnancy BMI, marital status, passive smoking, infant sex, creatinine, gestational age (birth length and birth weight models only).	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficients (95% CI) for MEHP:Gestational age, all participants: 0.12 (0.03, 0.22)Regression coefficients (95% CI) for MEHHP:Birth length, all participants: -0.16 (-0.28, -0.04)Birth length, boys: -0.17 (-0.31, -0.03)Birth length, girls: -0.21 (-0.40, -0.01)Regression coefficients (95% CI) for MEOHP:Gestational age, all participants: 0.18 (0.006, 0.35)Birth length, all participants: -0.17 (-0.30, -0.04)Birth length, boys: -0.17 (-0.33, -0.02)Birth length, girls: -0.26 (-0.47, -0.06)Regression coefficients (95% CI) for sum DEHP metabolites:Gestational age, all participants: 0.19 (0.03, 0.35)Gestational age, girls: 0.26 (0.01, 0.51)Birth length, all participants: -0.14 (-0.26, -0.02)Birth length, boys: -0.16 (-0.31, -0.01)Birth length, girls: -0.20 (-0.40, -0.01)Birth weight, boys: -72.81 (-143.35, -2.27). Significant positive associations between MEHP, MEHHP, MEOHP, and sum DEHP metabolites and gestational age among all participants. Significant inverse associations between MEHHP, MEOHP, and sum DEHP metabolites and birth length among all participants and in analyses stratified by sex..	Huang et. al 2018 4728501 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Mental developmental index	Health Effect: Neurological/Behavioral-Neurobehavioral outcomes (Bayley Scales of Infant Development-II (BSID-II), Social Maturity Scale (SMS), Child Behavior Checklist (CBCL))-Non-cancer. Outcome measure: Bayley Scales of Infant Development-II (BSID-II)	General public, Pregnant people. Infant (0-1), Toddler (2-3), Adults (18+). Korea; Seoul, Anyang, Ansan, Jeju. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Mother-child pairs in Korea (n=140 pairs total, n=86 with phthalates measured in maternal urine, n=73 with phthalates measured in breast milk). Children's Health and Environmental Chemicals in Korea (CHECK) cohort. Recruitment: 2011-2012; Follow-up: age 13-24 months.	Biomonitoring Biomonitoring matrix: Urine, Breast milk (including colostrum) Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at delivery (urine) and 30 days after delivery (breast milk).	Not specified. Confounders adjusted for: maternal age, birth delivery mode, monthly household income, child's sex, maternal Beck Depression Inventory score.	Lowest exposure concentration for a significant adverse health outcome response: continuous; MEHP in breastmilk median (25-75th percentile): 2.5 ug/L (1.7-3.7). Regression coefficient (95% CI) per 1-ln unit increase MEHP in breast milk:All participants: −5.60 (−11.05, −0.14) Boys: −8.26 (−16.47, −0.04). Significant inverse associations between MEHP in breast milk and mental index among all study participants and among boys. Associations in girls not significant. No significant associations for other DEHP metabolites or in metabolites measured in urine..	Kim et. al 2018 4728479 Low
abdominal obesity	Health Effect: Nutritional/Metabolic-Metabolic syndrome (MetS), insulin resistance (IR), abdominal obesity, high fasting blood glucose-Non-cancer-Cardiovascular-High blood pressure, high triglyceride, low HDL-Non-cancer. Outcome measure: Abdominal circumference measured at clinical exam defined as high for men if at least 90cm and for women if at least 80cm	Occupational workers. Adults (18+). Taiwan; Taoyuan. Female, Male. Cross-Sectional. PESS: Occupational. Voluntary military service members in Northern Taiwan (enrolled n=503, used in analysis=435). 2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at time of study enrollment.	Logistic Regression. Confounders adjusted for: sex and smoking habit.	Lowest exposure concentration for a significant adverse health outcome response: >0.01 ug/kg/day. OR (95% CI) for above vs. at or below the median: 1.816 (1.180, 2.797). A significant positive association was reported for the daily intake (DI) of BBP with abdominal obesity for participants with BBP DI greater than the median versus those at or below the median..	Ko et. al 2019 5433079 High

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Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
abdominal obesity	Health Effect: Nutritional/Metabolic-Metabolic syndrome (MetS), insulin resistance (IR), abdominal obesity, high fasting blood glucose-Non-cancer-Cardiovascular-High blood pressure, high triglyceride, low HDL-Non-cancer. Outcome measure: Abdominal circumference measured at clinical exam defined as high for men if at least 90cm and for women if at least 80cm	Occupational workers. Adults (18+). Taiwan; Taoyuan. Female, Male. Cross-Sectional. PESS: Occupational. Voluntary military service members in Northern Taiwan (enrolled n=503, used in analysis=435). 2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at time of study enrollment.	Logistic Regression. Confounders adjusted for: sex and smoking habit.	Lowest exposure concentration for a significant adverse health outcome response: >0.01 ug/kg/day. OR (95% CI) for above vs. at or below the median: 1.816 (1.180, 2.797). A significant positive association was reported for the daily intake (DI) of BBP with abdominal obesity for participants with BBP DI greater than the median versus those at or below the median..	Ko et. al 2019 5433079 High

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Temperament Questionnaire scores: 9 dimensions activity level, rhythmicity, withdrawal approach, adaptability, reaction intensity, mood quality, attention span/persistence, distractibility, and responsiveness threshold.	Health Effect: Neurological/Behavioral-Child temperament traits and behaviors (activity level, rhythmicity, withdrawal, adaptability, intensity of reaction, positive mood, persistence, distractibility, threshold of responsiveness)-Non-cancer-Reproductive/Developmental-Child temperament traits and behaviors (activity level, rhythmicity, withdrawal, adaptability, intensity of reaction, positive mood, persistence, distractibility, threshold of responsiveness)-Non-cancer. Outcome measure: Parent assessment using three age-specific questionnaires: Chinese Toddler Temperament Scale (CTTS) at age 2 years,, the Behavior Style Questionnaire-Chinese version (BSQ-C) at age 5 years, and the the Middle Childhood Temperament Questionnaire-Chinese version at age 11 years	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Taiwanese women from a pilot study for the Taiwan Maternal and Infant Cohort Study recruited during pregnancy (analysis sample included 208 mother-child pairs).. Pilot for the Taiwan Maternal and Infant Cohort Study (TMICS). Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during third trimester of pregnancy; child exposure measured at 2 years, 5 years, and 11 years.	Linear Regression. Confounders adjusted for: gender, parental education, parity, parenting styles, prenatal levels and urinary phthalate metabolite concentrations of children concurrent with outcome measures included jointly.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (SE) per 1 log10 unit increase for the following temperament domains. Maternal MBP, temperament at age 2 years: -withdrawal = 0.32 (0.14), $p<0.05$; -distractibility = 0.23 (0.012), $p<0.05$; -threshold of responsiveness = -0.23 (0.11), $p<0.05$; -by sex: intensity of reaction in boys = -0.29 (0.14), $p<0.05$. Maternal MBP, temperament at age 11 years: -positive mood = -0.27 (0.12), $p<0.05$. Child MBP, temperament at age 11 years: -adaptability = 0.32 (0.15), $p<0.05$.. Maternal MBP (ug/g creatinine) was significantly associated with greater withdrawal and distractibility as well as lower intensity of reaction at age 2 years, and less positive mood at age 11 years. Child MBP was significantly associated with greater adaptability at age 11 years..	Ku et. al 2020 5933569 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Temperament Questionnaire scores: 9 dimensions activity level, rhythmicity, withdrawal approach, adaptability, reaction intensity, mood quality, attention span/persistence, distractibility, and responsiveness threshold.	Health Effect: Neurological/Behavioral-Child temperament traits and behaviors (activity level, rhythmicity, withdrawal, adaptability, intensity of reaction, positive mood, persistence, distractibility, threshold of responsiveness)-Non-cancer-Reproductive/Developmental-Child temperament traits and behaviors (activity level, rhythmicity, withdrawal, adaptability, intensity of reaction, positive mood, persistence, distractibility, threshold of responsiveness)-Non-cancer. Outcome measure: Parent assessment using three age-specific questionnaires: Chinese Toddler Temperament Scale (CTTS) at age 2 years,, the Behavior Style Questionnaire-Chinese version (BSQ-C) at age 5 years, and the the Middle Childhood Temperament Questionnaire-Chinese version at age 11 years	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Taiwanese women from a pilot study for the Taiwan Maternal and Infant Cohort Study recruited during pregnancy (analysis sample included 208 mother-child pairs).. Pilot for the Taiwan Maternal and Infant Cohort Study (TMICS). Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during third trimester of pregnancy; child exposure measured at 2 years, 5 years, and 11 years.	Linear Regression. Confounders adjusted for: gender, parental education, parity, parenting styles, prenatal levels and urinary phthalate metabolite concentrations of children concurrent with outcome measures included jointly.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (SE) per 1 log10 unit increase for the following temperament domains. Maternal MBzP, temperament at age 2 years: -intensity of reaction = -0.27 (0.13), p<0.05; -intensity of reaction, boys = -0.35 (0.14), p<0.05; girls = -0.24 (0.29) ns. Maternal MBzP, temperament at age 5 years: -threshold of responsiveness = -0.46 (0.18), p<0.05; Maternal MBzP, temperament at age 11 years: -withdrawal = 0.39 (0.18), p<0.05.. Significant negative associations for maternal MBzP (ug/g creatinine) and intensity of reaction (age 2y), threshold of responsiveness (age 5y) and withdrawal (age 11 y)..	Ku et. al 2020 5933569 Medium

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Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Temperament Questionnaire scores: 9 dimensions activity level, rhythmicity, withdrawal approach, adaptability, reaction intensity, mood quality, attention span/persistence, distractibility, and responsiveness threshold.	Health Effect: Neurological/Behavioral-Child temperament traits and behaviors (activity level, rhythmicity, withdrawal, adaptability, intensity of reaction, positive mood, persistence, distractibility, threshold of responsiveness)-Non-cancer-Reproductive/Developmental-Child temperament traits and behaviors (activity level, rhythmicity, withdrawal, adaptability, intensity of reaction, positive mood, persistence, distractibility, threshold of responsiveness)-Non-cancer. Outcome measure: Parent assessment using three age-specific questionnaires: Chinese Toddler Temperament Scale (CTTS) at age 2 years,, the Behavior Style Questionnaire-Chinese version (BSQ-C) at age 5 years, and the the Middle Childhood Temperament Questionnaire-Chinese version at age 11 years	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Taiwanese women from a subsample of the Taiwan Maternal and Infant Cohort Study recruited during pregnancy (391 mother-child pairs).. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during third trimester of pregnancy; child exposure measured at 2 years, 5 years, and 11 years.	Linear Regression. Confounders adjusted for: gender, parental education, parity, parenting styles, prenatal levels and urinary phthalate metabolite concentrations of children concurrent with outcome measures included jointly.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (SE) per 1 log10 unit increase for the following temperament domains. Maternal MEHP, temperament at age 2 years: -intensity of reaction = -0.25 (0.11), $p<0.05$; -distractibility = 0.26 (0.12), $p<0.05$; -distractibility, boys = 0.40 (0.18), $p<0.05$; girls = 0.15 (1.22) ns. Child MEHP, temperament at age 11 years: -intensity of reaction = -0.29 (0.14), $p<0.05$.. Significant associations for maternal MEHP (ug/g creatinine) and lower intensity of reaction and lower distractibility at age 2y. Significant association for child MEHP and lower intensity of reaction at age 11 years. No.	Ku et. al 2020 5933569 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Temperament Questionnaire scores: 9 dimensions activity level, rhythmicity, withdrawal approach, adaptability, reaction intensity, mood quality, attention span/persistence, distractibility, and responsiveness threshold.	Health Effect: Neurological/Behavioral-Child temperament traits and behaviors (activity level, rhythmicity, withdrawal, adaptability, intensity of reaction, positive mood, persistence, distractibility, threshold of responsiveness)-Non-cancer-Reproductive/Developmental-Child temperament traits and behaviors (activity level, rhythmicity, withdrawal, adaptability, intensity of reaction, positive mood, persistence, distractibility, threshold of responsiveness)-Non-cancer. Outcome measure: Parent assessment using three age-specific questionnaires: Chinese Toddler Temperament Scale (CTTS) at age 2 years,, the Behavior Style Questionnaire-Chinese version (BSQ-C) at age 5 years, and the the Middle Childhood Temperament Questionnaire-Chinese version at age 11 years	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Taiwanese women from a subsample of the Taiwan Maternal and Infant Cohort Study recruited during pregnancy (391 mother-child pairs).. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during third trimester of pregnancy; child exposure measured at 2 years, 5 years, and 11 years.	Linear Regression. Confounders adjusted for: gender, parental education, parity, parenting styles, prenatal levels and urinary phthalate metabolite concentrations of children concurrent with outcome measures included jointly.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (SE) per 1 log10 unit increase for the following temperament domains. Maternal MEHHP, temperament at age 2 years: -withdrawal = +0.20 (0.09), p<0.05; [note: positive sign on coefficient may be an error given negative sex-stratified results]-withdrawal in boys = -0.29 (0.13), p<0.05, and in girls = -0.03 (0.17) ns. Maternal MEHHP, temperament at age 5 years: -withdrawal = -0.21 (0.09), p<0.05; Child MEHHP, temperament at age 11 years: -intensity of reaction = -0.43 (0.22), p<0.05.. Significant associations between maternal MEHHP and withdrawal at ages 2 and 5 years. Significant association between child MEHHP and lower intensity of reaction at age 11 years..	Ku et. al 2020 5933569 Medium

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Human Health Hazard Epidemology Extraction

Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Temperament Questionnaire scores: 9 dimensions activity level, rhythmicity, withdrawal approach, adaptability, reaction intensity, mood quality, attention span/persistence, distractibility, and responsiveness threshold.	Health Effect: Neurological/Behavioral-Child temperament traits and behaviors (activity level, rhythmicity, withdrawal, adaptability, intensity of reaction, positive mood, persistence, distractibility, threshold of responsiveness)-Non-cancer-Reproductive/Developmental-Child temperament traits and behaviors (activity level, rhythmicity, withdrawal, adaptability, intensity of reaction, positive mood, persistence, distractibility, threshold of responsiveness)-Non-cancer. Outcome measure: Parent assessment using three age-specific questionnaires: Chinese Toddler Temperament Scale (CTTS) at age 2 years,, the Behavior Style Questionnaire-Chinese version (BSQ-C) at age 5 years, and the the Middle Childhood Temperament Questionnaire-Chinese version at age 11 years	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Taiwanese women from a subsample of the Taiwan Maternal and Infant Cohort Study recruited during pregnancy (391 mother-child pairs).. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during third trimester of pregnancy; child exposure measured at 2 years, 5 years, and 11 years.	Linear Regression. Confounders adjusted for: gender, parental education, parity, parenting styles, prenatal levels and urinary phthalate metabolite concentrations of children concurrent with outcome measures included jointly.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (SE) per 1 log10 unit increase for the following temperament domains. Maternal MEOHP, temperament at age 2 years: -withdrawal in boys = -0.29 (0.13), $p<0.05$; in girls = -0.08 (0.19) ns. Maternal MEOHP, temperament at age 5 years: -threshold of responsiveness = -0.21 (0.08), $p<0.01$Child MEOHP, temperament at age 11 years: -adaptability = 0.19 (0.09), $p<0.05$.. Significant associations for maternal MEOHP (ug/g creatinine) and lower withdrawal in boys at age 2 years, and lower threshold of responsiveness at age 5 years. Significant association for child MEOPH and greater adaptability at age 11 years..	Ku et. al 2020 5933569 Medium

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Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Temperament Questionnaire scores: 9 dimensions activity level, rhythmicity, withdrawal approach, adaptability, reaction intensity, mood quality, attention span/persistence, distractibility, and responsiveness threshold.	Health Effect: Neurological/Behavioral-Child temperament traits and behaviors (activity level, rhythmicity, withdrawal, adaptability, intensity of reaction, positive mood, persistence, distractibility, threshold of responsiveness)-Non-cancer-Reproductive/Developmental-Child temperament traits and behaviors (activity level, rhythmicity, withdrawal, adaptability, intensity of reaction, positive mood, persistence, distractibility, threshold of responsiveness)-Non-cancer. Outcome measure: Parent assessment using three age-specific questionnaires: Chinese Toddler Temperament Scale (CTTS) at age 2 years,, the Behavior Style Questionnaire-Chinese version (BSQ-C) at age 5 years, and the the Middle Childhood Temperament Questionnaire-Chinese version at age 11 years	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Taiwanese women from a subsample of the Taiwan Maternal and Infant Cohort Study recruited during pregnancy (391 mother-child pairs).. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during third trimester of pregnancy; child exposure measured at 2 years, 5 years, and 11 years.	Linear Regression. Confounders adjusted for: gender, parental education, parity, parenting styles, prenatal levels and urinary phthalate metabolite concentrations of children concurrent with outcome measures included jointly.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (SE) per 1 log10 unit increase ∑MEHP for the following temperament domains. Maternal ∑MEHP, temperament at age 2 years: -threshold of responsiveness = -0.29 (0.13), p<0.05; -withdrawal in boys = -0.47 (0.22), p<0.05; in girls = 0.46 (0.28) ns; -intensity of reaction in boys =-0.31 (0.15), p<0.05; in girls = -0.09 (0.21) ns. Maternal ∑MEHP, temperament at age 5 years: -threshold of responsiveness = -0.30 (0.12), p<0.05.. Significant associations for maternal ∑MEHP (ug/g creatinine) and lower threshold of responsiveness overall at ages 2 years and 5 years. In boys maternal ∑MEHP was also associated with significantly lower withdrawal and intensity of reaction at age 2 years..	Ku et. al 2020 5933569 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Total SRS score, social awareness, social cognition, social communication, social motivation, restricted interests/repetitive behavior	Health Effect: Neurological/Behavioral-Autistic Traits: Total Social Responsiveness Scale (SRS) T-score, social awareness, social cognition, social communication, social motivation, restricted interests and repetitive behavior, Diagnostic and Statistical Manual of Mental Disorders (DSM)-5 compatible social communication, and DSM-5 compatible restricted interests and repetitive behavior-Non-cancer-Reproductive/Developmental-Autistic Traits: Total Social Responsiveness Scale (SRS) T-score, social awareness, social cognition, social communication, social motivation, restricted interests and repetitive behavior, Diagnostic and Statistical Manual of Mental Disorders (DSM)-5 compatible social communication, and DSM-5 compatible restricted interests and repetitive behavior-Non-cancer. Outcome measure: SRS-2	General public, Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). 556 Canadian mothers and infants (Enrolled n =2001, Follow-up n =610; Used in analysis n = 510). Maternal–Infant Research on Environmental Chemicals (MIREC). 2008-2011.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Maternal first trimester exposure measured via biomonitoring.	Generalized Additive Model (GAM). Confounders adjusted for: study city, child sex, household income, maternal education, maternal age, parity, marital status, race/ethnicity, and year of enrollment.	Lowest exposure concentration for a significant adverse health outcome response: continuous. A 2-fold increase in urinary MBP and MCPP concentrations was associated with increases of 0.6 (95% CI: 0.1,1.0) p=0.02, and 0.5 (95% CI: 0.1,0.8), p=0.01, points in total SRS scores, respectively. A 2-fold increase in MBP and MCPP concentrations was associated with increases of 0.5 (95%CI:0.1, 1.0) p=0.02, and 0.6 (95% CI: 0.3,0.9) p<0.001, points, respectively, on the social communication subscale. Comparable estimates were observed for the other SRS subscales (Table 2), regardless of significance. A 2-fold increase in urinary MBP was associated with an increase of 0.6 (95% CI: 0.1, 1.1) p=0.01 points, and a 2-fold increase in urinary MCPP was associated with an increase of 0.3 (95% CI: 0.0, 0.7) p=0.06, in social cognition scores. A 2-fold increase in urinary MBP was associated with an increase of 0.5 (95% CI: 0.0, 1.0) p=0.06 points, and a 2-fold increase in urinary MCPP was associated with an increase of 0.4 (95% CI: 0.0, 0.8) p=0.07, in social motivation scores. A 2-fold increase in urinary MBP was associated with an increase of 0.5 (95% CI: 0.0, 1.0) p=0.05 points, and a 2-fold increase in urinary MCPP was associated with an increase of 0.5 (95% CI: 0.1, 0.9) p=0.01, in restricted interests/repetitive behavior scores. No associations were observed for MBzP and ΣDEHP (Table 2).. In multivariable adjusted models, increasing gestational MBP or MCPP urinary concentrations were significantly associated with higher total SRS T-scores indicative of greater social impairment (Table 2). For SRS subscales, maternal urinary MBP and MCPP concentrations were associated with higher social cognition, social communication, social motivation, and restricted interests/repetitive behaviors subscales. No similar associations were observed for MBzP or ΣDEHP (Table 2)..	Oulhote et. al 2020 6718069 Medium

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Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
BOYS: Total SRS score, social awareness, social cognition, social communication, social motivation, restricted interests/repetitive behavior	Health Effect: Neurological/Behavioral-Autistic Traits: Total Social Responsiveness Scale (SRS) T-score, social awareness, social cognition, social communication, social motivation, restricted interests and repetitive behavior, Diagnostic and Statistical Manual of Mental Disorders (DSM)-5 compatible social communication, and DSM-5 compatible restricted interests and repetitive behavior-Non-cancer-Reproductive/Developmental-Autistic Traits: Total Social Responsiveness Scale (SRS) T-score, social awareness, social cognition, social communication, social motivation, restricted interests and repetitive behavior, Diagnostic and Statistical Manual of Mental Disorders (DSM)-5 compatible social communication, and DSM-5 compatible restricted interests and repetitive behavior-Non-cancer. Outcome measure: SRS-2	General public, Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). 556 Canadian mothers and infants (Enrolled n =2001, Follow-up n =610; Used in analysis n = 510). Maternal–Infant Research on Environmental Chemicals (MIREC). 2008-2011.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Maternal first trimester exposure measured via biomonitoring.	Generalized Additive Model (GAM). Confounders adjusted for: study city, child sex, household income, maternal education, maternal age, parity, marital status, race/ethnicity, and year of enrollment.	Lowest exposure concentration for a significant adverse health outcome response: continuous. A 2-fold increase in gestational urinary MBP concentrations and SRS scores was associated with 1.0 (95% CI: 0.4, 1.6), 1.1 (95% CI: 0.4, 1.7), 0.9 (95% CI: 0.3, 1.6) and 0.9 (95% CI: 0.2, 1.6) higher Total, Social Cognition Social Communication, and Restricted Interests/Repetitive Behavior scores among boys (Table 2), respectively, but not among girls. No pattern of effect modification by sex was noted for MCPP, MBzP or ΣDEHP.. Overall, associations between gestational urinary phthalate concentrations and SRS scores appeared stronger in boys than girls, with many associations with MBP exhibiting significant (p<0.1) effect modification by child sex (Figure 2; Table 2)..	Oulhote et. al 2020 6718069 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
FOLIC ACID SUPPLEMENTATION: Total SRS score, social awareness, social cognition, social communication, social motivation, restricted interests/repetitive behavior	Health Effect: Neurological/Behavioral-Autistic Traits: Total Social Responsiveness Scale (SRS) T-score, social awareness, social cognition, social communication, social motivation, restricted interests and repetitive behavior, Diagnostic and Statistical Manual of Mental Disorders (DSM)-5 compatible social communication, and DSM-5 compatible restricted interests and repetitive behavior-Non-cancer-Reproductive/Developmental-Autistic Traits: Total Social Responsiveness Scale (SRS) T-score, social awareness, social cognition, social communication, social motivation, restricted interests and repetitive behavior, Diagnostic and Statistical Manual of Mental Disorders (DSM)-5 compatible social communication, and DSM-5 compatible restricted interests and repetitive behavior-Non-cancer. Outcome measure: SRS-2	General public, Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). 556 Canadian mothers and infants (Enrolled n =2001, Follow-up n =610; Used in analysis n = 510). Maternal–Infant Research on Environmental Chemicals (MIREC). 2008-2011.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Maternal first trimester exposure measured via biomonitoring.	Generalized Additive Model (GAM). Confounders adjusted for: study city, child sex, household income, maternal education, maternal age, parity, marital status, race/ethnicity, and year of enrollment.	Lowest exposure concentration for a significant adverse health outcome response: continuous. A 2-fold increase in gestational urinary MBP concentrations was associated with an increase of 1.3 points (95% CI: 0.4, 2.3) in total SRS scores among children whose mothers had taken <400 micrograms of folic acid per day while results for children whose mothers had taken greater than or equal to 400 micrograms of folic acid per day noted a 2-fold increase in gestational urinary MBP was associated with a 0.4 (95% CI: -0.1, 0.8)) points change in total SRS scores, p for interaction=0.04. A 2-fold increase in gestational urinary MBP concentrations was associated with an increase of 1.7 points (95% CI: 0.7, 2.6) in social cognition scores among children whose mothers had taken <400 micrograms of folic acid per day while results for children whose mothers had taken greater than or equal to 400 micrograms of folic acid per day noted a 2-fold increase in gestational urinary MBP was associated with a 0.4 (95% CI: -0.1, 0.8)) points change in social cognition scores, p for interaction=0.01(Table S3). None of the other SRS subscales indicated significant folic acid intake interactions with MBP.. Folic acid supplementation during pregnancy consistently and significantly attenuated the positive associations between gestational urinary phthalate concentrations and high SRS total and subscale scores (Figure 3, Table S3). This trend of effect modification was significant (P < 0.1) for MCPP and ΣDEHP with all SRS subscales and Total scores and was also significant for MBP with Social Cognition and Total scores, and for MBzP with Social Cognition, Restricted Interests and Repetitive Behavior and Total SRS scores..	Oulhote et. al 2020 6718069 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
FOLIC ACID SUPPLEMENTATION: Total SRS score, social awareness, social cognition, social communication, social motivation, restricted interests/repetitive behavior	Health Effect: Neurological/Behavioral-Autistic Traits: Total Social Responsiveness Scale (SRS) T-score, social awareness, social cognition, social communication, social motivation, restricted interests and repetitive behavior, Diagnostic and Statistical Manual of Mental Disorders (DSM)-5 compatible social communication, and DSM-5 compatible restricted interests and repetitive behavior-Non-cancer-Reproductive/Developmental-Autistic Traits: Total Social Responsiveness Scale (SRS) T-score, social awareness, social cognition, social communication, social motivation, restricted interests and repetitive behavior, Diagnostic and Statistical Manual of Mental Disorders (DSM)-5 compatible social communication, and DSM-5 compatible restricted interests and repetitive behavior-Non-cancer. Outcome measure: SRS-2	General public, Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). 556 Canadian mothers and infants (Enrolled n =2001, Follow-up n =610; Used in analysis n = 510). Maternal–Infant Research on Environmental Chemicals (MIREC). 2008-2011.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Maternal first trimester exposure measured via biomonitoring.	Generalized Additive Model (GAM). Confounders adjusted for: study city, child sex, household income, maternal education, maternal age, parity, marital status, race/ethnicity, and year of enrollment.	Lowest exposure concentration for a significant adverse health outcome response: continuous. A 2-fold increase in gestational urinary MCPP concentrations was associated with an increase of 1.8 points (95% CI: 1.0, 2.6) in total SRS scores among children whose mothers had taken <400 micrograms of folic acid per day while results for children whose mothers had taken greater than or equal to 400 micrograms of folic acid per day noted a 2-fold increase in gestational urinary MCPP was associated with a weaker increase of 0.3 (95% CI: 0.0, 0.7)) points in total SRS scores, p for interaction <0.001 (Table S3). Similarly, for social awareness, social cognition, social communication, social motivation and restricted interests/repetitive behavior, a 2-fold increase in gestational urinary MCPP was associated with an increase of 1.2 (95% CI: 0.1, 2.3), 1.9 (95% CI: 1.1,2.8), 1.4 (95% CI: 0.6, 2.3), 1.6 (95% CI: 0.6, 2.6), and 1.9 (95% CI: 0.9, 2.8), respectively in children whose mothers had taken inadequate (<400 micrograms) of folic acid per day versus 0.0 (95% CI: -0.4, 0.5) p-interaction=0.04, 0.1 (95% CI: -0.3, 0.4) p-interaction<0.001, 0.5 (95% CI: 0.2, 0.9) p-interaction=0.04, and 0.2 (-0.2, 0.6) p-interaction=0.01, respectively in children whose mothers had taken adequate (>=400 micrograms) of folic acid per day.. Folic acid supplementation during pregnancy consistently and significantly attenuated the positive associations between gestational urinary phthalate concentrations and high SRS total and subscale scores (Figure 3, Table S3). This trend of effect modification was significant (P < 0.1) for MCPP and ΣDEHP with all SRS subscales and Total scores and was also significant for MBP with Social Cognition and Total scores, and for MBzP with Social Cognition, Restricted Interests and Repetitive Behavior and Total SRS scores..	Oulhote et. al 2020 6718069 Medium

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Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
FOLIC ACID SUPPLEMENTATION: Total SRS score, social awareness, social cognition, social communication, social motivation, restricted interests/repetitive behavior	Health Effect: Neurological/Behavioral-Autistic Traits: Total Social Responsiveness Scale (SRS) T-score, social awareness, social cognition, social communication, social motivation, restricted interests and repetitive behavior, Diagnostic and Statistical Manual of Mental Disorders (DSM)-5 compatible social communication, and DSM-5 compatible restricted interests and repetitive behavior-Non-cancer-Reproductive/Developmental-Autistic Traits: Total Social Responsiveness Scale (SRS) T-score, social awareness, social cognition, social communication, social motivation, restricted interests and repetitive behavior, Diagnostic and Statistical Manual of Mental Disorders (DSM)-5 compatible social communication, and DSM-5 compatible restricted interests and repetitive behavior-Non-cancer. Outcome measure: SRS-2	General public, Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). 556 Canadian mothers and infants (Enrolled n =2001, Follow-up n =610; Used in analysis n = 510). Maternal–Infant Research on Environmental Chemicals (MIREC). 2008-2011.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Maternal first trimester exposure measured via biomonitoring.	Generalized Additive Model (GAM). Confounders adjusted for: study city, child sex, household income, maternal education, maternal age, parity, marital status, race/ethnicity, and year of enrollment.	Lowest exposure concentration for a significant adverse health outcome response: continuous. A 2-fold increase in gestational urinary MBzP concentrations was associated with an increase of 1.2 points (95% CI: 0.2, 2.2) in total SRS scores among children whose mothers had taken <400 micrograms of folic acid per day while results for children whose mothers had taken greater than or equal to 400 micrograms of folic acid per day noted a 2-fold increase in gestational urinary MBzP was associated with a 0.0 (95% CI: -0.4, 0.4)) points change in total SRS scores, p for interaction= 0.03 (Table S3). Similarly, for social cognition and restricted interests, a 2-fold increase in gestational urinary MBzP was associated with an increase of 1.7 (95% CI: 0.7, 2.8) and 1.1 (95% CI: 0.0,2.3), respectively in children whose mothers had taken inadequate (<400 micrograms) of folic acid per day versus 0.0 (95% CI: -0.4, 0.4) p-interaction<0.001 and 0.1 (95% CI: -0.3, 0.6) p-interaction=0.08, respectively in children whose mothers had taken adequate (>=400 micrograms) of folic acid per day. None of the other SRS subscales indicated significant folic acid intake interactions with MBzP.. Folic acid supplementation during pregnancy consistently and significantly attenuated the positive associations between gestational urinary phthalate concentrations and high SRS total and subscale scores (Figure 3, Table S3). This trend of effect modification was significant (P < 0.1) for MCPP and ΣDEHP with all SRS subscales and Total scores and was also significant for MBP with Social Cognition and Total scores, and for MBzP with Social Cognition, Restricted Interests and Repetitive Behavior and Total SRS scores..	Oulhote et. al 2020 6718069 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
FOLIC ACID SUPPLEMENTATION: Total SRS score, social awareness, social cognition, social communication, social motivation, restricted interests/repetitive behavior	Health Effect: Neurological/Behavioral-Autistic Traits: Total Social Responsiveness Scale (SRS) T-score, social awareness, social cognition, social communication, social motivation, restricted interests and repetitive behavior, Diagnostic and Statistical Manual of Mental Disorders (DSM)-5 compatible social communication, and DSM-5 compatible restricted interests and repetitive behavior-Non-cancer-Reproductive/Developmental-Autistic Traits: Total Social Responsiveness Scale (SRS) T-score, social awareness, social cognition, social communication, social motivation, restricted interests and repetitive behavior, Diagnostic and Statistical Manual of Mental Disorders (DSM)-5 compatible social communication, and DSM-5 compatible restricted interests and repetitive behavior-Non-cancer. Outcome measure: SRS-2	General public, Pregnant people. Toddler (2-3), Preschool (3-5), Adults (18+). Canada. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). 556 Canadian mothers and infants (Enrolled n =2001, Follow-up n =610; Used in analysis n = 510). Maternal–Infant Research on Environmental Chemicals (MIREC). 2008-2011.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Maternal first trimester exposure measured via biomonitoring.	Generalized Additive Model (GAM). Confounders adjusted for: study city, child sex, household income, maternal education, maternal age, parity, marital status, race/ethnicity, and year of enrollment.	Lowest exposure concentration for a significant adverse health outcome response: continuous. A 2-fold increase in gestational urinary ΣDEHP concentrations was associated with an increase of 1.5 points (95% CI: 0.5, 2.5) in total SRS scores among children whose mothers had taken <400 micrograms of folic acid per day while results for children whose mothers had taken greater than or equal to 400 micrograms of folic acid per day noted a 2-fold increase in gestational urinary ΣDEHP was associated with a decrease -0.1 (95% CI: -0.6, 0.4)) points in total SRS scores, p for interaction <0.001 (Table S3). Similarly, for social awareness, social cognition, social communication, social motivation and restricted interests/repetitive behavior, a 2-fold increase in gestational urinary ΣDEHP was associated with an increase of 0.9 (95% CI: -0.4, 2.1), 1.7 (95% CI: 0.7,2.7), 1.3 (95% CI: 0.3, 2.3), 1.2 (95% CI: 0.0, 2.4), and 1.9 (95% CI: 0.9, 2.8), respectively in children whose mothers had taken inadequate (<400 micrograms) of folic acid per day versus -0.5 (95% CI: -1.2, 0.1) p-interaction=0.03, -0.2 (95% CI: -0.7, 0.3) p-interaction<0.001, 0.1 (95% CI: -0.4, 0.6) p-interaction=0.02, and -0.2 (-0.8, 0.3) p-interaction=0.01, respectively in children whose mothers had taken adequate (>=400 micrograms) of folic acid per day.. Folic acid supplementation during pregnancy consistently and significantly attenuated the positive associations between gestational urinary phthalate concentrations and high SRS total and subscale scores (Figure 3, Table S3). This trend of effect modification was significant (P < 0.1) for MCPP and ΣDEHP with all SRS subscales and Total scores and was also significant for MBP with Social Cognition and Total scores, and for MBzP with Social Cognition, Restricted Interests and Repetitive Behavior and Total SRS scores..	Oulhote et. al 2020 6718069 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
cingulate volume, cerebellum volume	Health Effect: Neurological/Behavioral-Brain MRI voxel-based morphometry (VBM) and generalized q-sampling imaging (GQI) mapping-Non-cancer. Outcome measure: brain MRI	General public, Pregnant people. Teens (12-17), Adults (18+). Taiwan; central Taiwan. Female, Male. Cohort (Prospective). PESS: . 49 mother-child pairs in Taiwan. Taiwan Maternal and Infant Cohort Study. NR.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during pregnancy.	Linear Regression. Confounders adjusted for: Gender, IQ, family income, creatinine.	Lowest exposure concentration for a significant adverse health outcome response: continuous. p-value < 0.05. Statistically significant negative associations were found between MBzP exposure and cingulate and cerebellum volumes (corrected $p<0.05$)..	Shen et. al 2021 8453074 Medium
generalized q-sampling imaging (GQI): generalized fractional anisotropy (GFA) in superior longitudinal fasciculus (SLF)	Health Effect: Neurological/Behavioral-Brain MRI voxel-based morphometry (VBM) and generalized q-sampling imaging (GQI) mapping-Non-cancer. Outcome measure: brain MRI	General public, Pregnant people. Teens (12-17), Adults (18+). Taiwan; central Taiwan. Female, Male. Cohort (Prospective). PESS: . 49 mother-child pairs in Taiwan. Taiwan Maternal and Infant Cohort Study. NR.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during pregnancy.	Partial correlation. Confounders adjusted for: Gender, IQ, family income, creatinine.	Lowest exposure concentration for a significant adverse health outcome response: continuous. BMP: r=-0.403, p-value=0.008. MBP/DEHP/MEHP concentrations and GFA/NQA in the superior longitudinal fasciculus.	Shen et. al 2021 8453074 Medium
generalized q-sampling imaging (GQI): generalized fractional anisotropy (GFA) in the superior longitudinal fasciculus (SLF)	Health Effect: Neurological/Behavioral-Brain MRI voxel-based morphometry (VBM) and generalized q-sampling imaging (GQI) mapping-Non-cancer. Outcome measure: brain MRI	General public, Pregnant people. Teens (12-17), Adults (18+). Taiwan; central Taiwan. Female, Male. Cohort (Prospective). PESS: . 49 mother-child pairs in Taiwan. Taiwan Maternal and Infant Cohort Study. NR.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during pregnancy.	Partial correlation. Confounders adjusted for: Gender, IQ, family income, creatinine.	Lowest exposure concentration for a significant adverse health outcome response: continuous. DEHP: r=-0.316, p-value=0.044; MEOHP: r=-0.350, p-value=0.025. Significant negative correlations between DEHP/MEHP/MEOHP concentrations and GFA in the corona radiata (CR).	Shen et. al 2021 8453074 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
generalized q-sampling imaging (GQI): generalized fractional anisotropy (GFA) in corona radiata (CR)	Health Effect: Neurological/Behavioral-Brain MRI voxel-based morphometry (VBM) and generalized q-sampling imaging (GQI) mapping-Non-cancer. Outcome measure: brain MRI	General public, Pregnant people. Teens (12-17), Adults (18+). Taiwan; central Taiwan. Female, Male. Cohort (Prospective). PESS: . 49 mother-child pairs in Taiwan. Taiwan Maternal and Infant Cohort Study. NR.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during pregnancy.	Partial correlation. Confounders adjusted for: Gender, IQ, family income, creatinine.	Lowest exposure concentration for a significant adverse health outcome response: continuous. DEHP: r=-0.372, p-value=0.017. Significant negative correlations between DEHP/MEHP/MEOHP concentrations and GFA in the superior longitudinal fasciculus (SLF).	Shen et. al 2021 8453074 Medium
coronary heart disease	Health Effect: Cardiovascular-coronary heart disease-Non-cancer. Outcome measure: Cases: not specified, but likely medical records and/or physician diagnosis given recruitment of occurred among hospitalized patients. Controls: self-report of absence of physician-diagnosed coronary heart disease.	General public, Patients in clinics. Adults (18+). Taiwan. Female, Male. Case-Control. PESS: . Patients with coronary heart disease (n=91 cases) and volunteers without coronary heart disease (n=360 controls) (total n=451). 2008-2011.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured near time of enrollment (for cases, between 3 -14 days after hospital discharge).	Logistic Regression. Confounders adjusted for: age, gender, BMI, diabetes mellitus, hypertension, hypercholesterolemia, use of statins, smoking, alcohol consumption.	Lowest exposure concentration for a significant adverse health outcome response: >=30.31 ug/g creatinine. OR (95% CI) for Q2 vs. Q1: 1.85 (0.83, 4.13)OR (95% CI) for Q3 vs. Q1: 2.90 (1.32, 6.40). Significant positive association between MnBP and coronary heart disease for Q3 vs. Q1 only. There was a positive relationship for Q2 vs. Q1 but was not statistically significant..	Su et. al 2019 5432947 Low
coronary heart disease	Health Effect: Cardiovascular-coronary heart disease-Non-cancer. Outcome measure: Cases: not specified, but likely medical records and/or physician diagnosis given recruitment of occurred among hospitalized patients. Controls: self-report of absence of physician-diagnosed coronary heart disease.	General public, Patients in clinics. Adults (18+). Taiwan. Female, Male. Case-Control. PESS: . Patients with coronary heart disease (n=91 cases) and volunteers without coronary heart disease (n=360 controls) (total n=451). 2008-2011.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured near time of enrollment (for cases, between 3 -14 days after hospital discharge).	Logistic Regression. Confounders adjusted for: age, gender, BMI, diabetes mellitus, hypertension, hypercholesterolemia, use of statins, smoking, alcohol consumption.	Lowest exposure concentration for a significant adverse health outcome response: MEHP: >= 8.25 ug/g creatinine. MEHP:OR (95% CI) for Q2 vs. Q1: 2.18 (0.97, 4.90) OR (95% CI) for Q3 vs. Q1: 2.77 (1.22, 6.28). Significant positive association between MEHP and coronary heart disease for Q3 vs. Q1. There was a positive relationship for Q2 vs. Q1 but was not statistically significant. No statistically significant results for other DEHP metabolites (MEHHP, MEOHP) or for the sum of all three DEHP metabolites..	Su et. al 2019 5432947 Low

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Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
coronary heart disease	Health Effect: Cardiovascular-coronary heart disease-Non-cancer. Outcome measure: Cases: not specified, but likely medical records and/or physician diagnosis given recruitment of occurred among hospitalized patients. Controls: self-report of absence of physician-diagnosed coronary heart disease.	General public, Patients in clinics. Adults (18+). Taiwan. Female, Male. Case-Control. PESS: . Patients with coronary heart disease (n=91 cases) and volunteers without coronary heart disease (n=360 controls) (total n=451). 2008-2011.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured near time of enrollment (for cases, between 3 -14 days after hospital discharge).	Logistic Regression. Confounders adjusted for: age, gender, BMI, diabetes mellitus, hypertension, hypercholesterolemia, use of statins, smoking, alcohol consumption.	Lowest exposure concentration for a significant adverse health outcome response: >=15.66 ug/g creatinine. OR (95% CI) for Q2 vs. Q1: 1.97 (0.87, 4.45)OR (95% CI) for Q3 vs. Q1: 3.19 (1.41, 7.21). Significant positive association between MiBP and coronary heart disease for Q3 vs. Q1. There was a positive relationship for Q2 vs. Q1 but was not statistically significant..	Su et. al 2019 5432947 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
atherothrombotic markers (high-sensitivity C-reactive protein, fibrinogen, D-dimer)	Health Effect: Cardiovascular-atherothrombotic markers (high-sensitivity C-reactive protein, fibrinogen, D-dimer)-Non-cancer. Outcome measure: not specified, but likely medical records and/or physician diagnosis given recruitment of occurred among hospitalized patients	General public, Patients in clinics. Adults (18+). Taiwan. Female, Male. Case-Control. PESS: . Patients with coronary heart disease (n=180 cases). 2008-2011.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured near time of enrollment (for cases, between 3 -14 days after hospital discharge).	Linear Regression. Confounders adjusted for: age, gender, BMI, diabetes mellitus, hypertension, hypercholesterolemia, use of statins, smoking, alcohol consumption.	Lowest exposure concentration for a significant adverse health outcome response: MEHP: >=11.8 ug/g creatinine for hs-CRP and Dimer outcomes; MEHHP: >=31.1 ug/g creatinine for hs-CRP, fibrinogen and D-dimer outcomes; MEOHP: >=19.8 ug/g creatinine for hs-CRP, fibrinogen and D-dimer outcomes; Sum of DEHP metabolites (MEHP, MEHHP, MEOHP): >=0.22 mmol/g creatinine hs-CRP, fibrinogen and D-dimer outcomes. Quantitative results below are estimated mean values (95% CI) of the outcomes for each quartile of each DEHP metabolite. Quartiles that were statistically significantly different from Q1 are indicated with an asterisk (*). Only pairs of exposures and outcomes with statistically significant results for at least one quartile are extracted.MEHP and high sensitivity C-reactive protein:Q1: 5.39(3.96,6.82) mg/LQ2: 6.67(4.76,8.57) mg/LQ3: 9.84(7.98,11.70) mg/LQ4: 13.41(10.82,16.00)* mg/LMEHP and D-dimer:Q1: 0.72(0.58,0.86) mg/LQ2: 0.67(0.59,0.75) mg/LQ3: 1.14(0.92,1.36) mg/LQ4: 2.22(1.97,2.47)* mg/LMEHHP and high sensitivity C-reactive protein:Q1: 6.11(4.99,7.22) mg/LQ2: 8.65(6.54,10.75) mg/LQ3: 6.05(4.61,7.48) mg/LQ4: 16.04(13.02,19.06)* mg/LMEHHP and fibrinogen:Q1: 9.54(9.17,9.92) mmol/LQ2: 10.43(9.66,11.21) mmol/LQ3: 10.11(9.51,10.72) mmol/LQ4: 11.54(10.96,12.13)* mmol/LMEHHP and D-dimer:Q1: 0.60(0.55,0.65) mg/LQ2: 0.82(0.67,0.97) mg/LQ3: 1.09(0.83,1.35) mg/LQ4: 2.50(2.25,2.75)* mg/LMEOHP and high sensitivity C-reactive protein:Q1: 5.25(3.96,6.54) mg/LQ2: 8.13(6.99,9.26) mg/LQ3: 6.81(5.21,8.40) mg/LQ4: 16.10(13.31,18.89)* mg/LMEOHP and fibrinogen:Q1: 9.62(9.17,10.08) mmol/LQ2: 9.52(9.00,10.04) mmol/LQ3: 10.20(9.61,10.79) mmol/LQ4: 11.86(11.27,12.45)* mmol/LMEOHP and D-dimer:Q1: 0.60(0.56,0.64) mg/LQ2: 0.75(0.60,0.90) mg/LQ3: 1.06(0.80,1.32) mg/LQ4: 2.49(2.25,2.74)* mg/LSum DEHP metabolites and high sensitivity C-reactive protein:Q1: 0.49(0.33,0.65) mg/LQ2: 0.81(0.66,0.95) mg/LQ3: 0.76(0.63,0.89) mg/LQ4: 1.55(1.27,1.84)* mg/LSum DEHP metabolites and fibrinogen:Q1: 9.38(8.84,9.92) mmol/LQ2: 10.05(9.35,10.76) mmol/LQ3: 10.50(10.07,10.93) mmol/LQ4: 11.41(10.83,12.0)* mmol/L Sum DEHP metabolites and D-dimer:Q1: 0.59(0.53,0.65) mg/LQ2: 0.64(0.54,0.74) mg/LQ3: 1.19(0.94,1.44) mg/LQ4: 11.41(10.83,12.0)* mg/L. Significant associations for Q4 vs. Q1 for high sensitivity C-reactive protein and D-dimer and all DEHP	Su et. al 2019 5432947 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Carotid intima-media thickness (CIMT)	Health Effect: Cardiovascular-Subclinical atherosclerosis (carotid intima-media thickness (CIMT))-Non-cancer. Outcome measure: High-resolution B-mode ultrasonography	General public. Teens (12-17), Adults (18+). Taiwan; Taipei. Female, Male. Cross-Sectional. PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition). Lifestage PESS: Adolescents (age 11 years through < 21 years). Adolescents and young adults in Taipei (n=787) recruited in 2006-2008. 38% of had a history of elevated childhood blood pressure in a survey conducted in 1992-2000.. YOung TAiwanese Cohort (YOTA). Recruitment 2006-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured concurrent with outcome.	Linear Regression. Confounders adjusted for: Age, sex, BMI, hs-CRP, fasting glucose, LDL-C, triglycerides, hypertension, childhood elevated blood pressure group, smoking, alcohol drinking, regular exercise, and household income.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta (SE), p-values for log MEHP and mean IMT (mm) at:-Common carotid artery (CCA) = 0.0043 ± 0.0007, p<0.001 -Carotid bulb = 0.3248 ± 0.027, p<0.001 -Internal carotid artery (ICA) = 0.0016 ± 0.0008, p<0.05 -Mean CIMT = 0.0034 ± 0.0007, p<0.001 Beta (SE), p-values for log ∑DEHP and mean IMT (mm) at:-Common carotid artery (CCA) = 0.0062 ± 0.0019, p<0.01 -Carotid bulb = 0.0049 ± 0.0032, ns-Internal carotid artery (ICA) = 0.0042 ± 0.0022, ns-Mean CIMT = 0.0052 ± 0.0018, p<0.01Beta (SE), p-values for log MEHHP and mean IMT (mm) at:-Internal carotid artery (ICA) = 0.0054 ± 0.0021, p<0.05-Other associations nsBeta (SE), p-values for log MEOHP and mean IMT (mm) at:-Internal carotid artery (ICA) = 0.0055 ± 0.0022, p<0.05-Other associations ns. MEHP was associated with significantly higher mean CIMT for all four measures analyzed in this study: the common carotid artery (CCA) proximal to the carotid bifurcation, internal carotid artery (ICA), the carotid bulb, and overall mean IMT. ∑DEHP was associated with significant increases in two of these measures (CCA and overall mean CIMT), while MEHHP and MEOHP were associated with significant increases in ICA thickness..	Su et. al 2019 5494915 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Carotid intima-media thickness (CIMT)	Health Effect: Cardiovascular-Subclinical atherosclerosis (carotid intima-media thickness (CIMT))-Non-cancer. Outcome measure: High-resolution B-mode ultrasonography	General public. Teens (12-17), Adults (18+). Taiwan; Taipei. Female, Male. Cross-Sectional. PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition). Lifestage PESS: Adolescents (age 11 years through < 21 years). Adolescents and young adults in Taipei (n=787) recruited in 2006-2008. 38% of had a history of elevated childhood blood pressure in a survey conducted in 1992-2000.. YOung TAiwanese Cohort (YOTA). Recruitment 2006-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured concurrent with outcome.	Logistic Regression. Confounders adjusted for: Age, sex, BMI, hs-CRP, fasting glucose, LDL-C, triglycerides, hypertension, smoking, alcohol drinking, and household income.	Lowest exposure concentration for a significant adverse health outcome response: MEHP: 1.89-12.76 ug/g creatinine; ∑DEHP: 0.21-0.38 umol/g creatinine. Odds ratio (95% CI), for MEHP quartiles and elevated mean IMT (above the 75th percentile):Q2 vs Q1 = 2.13 (1.18,3.84)Q3 vs Q1 = 4.02 (2.26,7.15)Q4 vs Q1 = 7.39 (4.16,13.12)Odds ratio (95% CI), for ∑DEHP quartiles and elevated mean IMT (above the 75th percentile):Q2 vs Q1 = 1.28 (0.74, 2.20Q3 vs Q1 = 2.75 (1.65, 4.57)Q4 vs Q1 = 2.46 (1.46, 4.14). MEHP and ∑DEHP were both associated with significantly higher odds of elevated CIMT.	Su et. al 2019 5494915 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Carotid intima-media thickness (CIMT)	Health Effect: Cardiovascular-Subclinical atherosclerosis (carotid intima-media thickness (CIMT))-Non-cancer. Outcome measure: High-resolution B-mode ultrasonography	General public. Teens (12-17), Adults (18+). Taiwan; Taipei. Female, Male. Cross-Sectional. PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition). Lifestage PESS: Adolescents (age 11 years through < 21 years). Adolescents and young adults in Taipei (n=787) recruited in 2006-2008. 38% of had a history of elevated childhood blood pressure in a survey conducted in 1992-2000.. YOung TAiwanese Cohort (YOTA). Recruitment 2006-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured concurrent with outcome.	Linear Regression. Confounders adjusted for: Age, sex, BMI, hs-CRP, fasting glucose, LDL-C, triglycerides, hypertension, childhood elevated blood pressure group, smoking, alcohol drinking, regular exercise, and household income.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta (SE), p-values for log MnBP and mean IMT (mm) at:-Common carotid artery (CCA) = 0.0058 $\pm$ 0.002, $p<0.01$ -Carotid bulb = 0.008 $\pm$ 0.0032, $p<0.05$ -Internal carotid artery (ICA) = -0.0011 $\pm$ 0.0022, ns -Mean CIMT = 0.0045 $\pm$ 0.0018, $p<0.05$. MnBP was associated with significantly higher mean CIMT for three of four measures analyzed in this study: the common carotid artery (CCA) proximal to the carotid bifurcation, the carotid bulb, and overall mean IMT..	Su et. al 2019 5494915 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Carotid intima-media thickness (CIMT)	Health Effect: Cardiovascular-Subclinical atherosclerosis (carotid intima-media thickness (CIMT))-Non-cancer. Outcome measure: High-resolution B-mode ultra-sonography	General public. Teens (12-17), Adults (18+). Taiwan; Taipei. Female, Male. Cross-Sectional. PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition). Lifestage PESS: Adolescents (age 11 years through < 21 years). Adolescents and young adults in Taipei (n=787) recruited in 2006-2008. 38% of had a history of elevated childhood blood pressure in a survey conducted in 1992-2000.. YOung TAiwanese Cohort (YOTA). Recruitment 2006-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured concurrent with outcome.	Logistic Regression. Confounders adjusted for: Age, sex, BMI, hs-CRP, fasting glucose, LDL-C, triglycerides, hypertension, smoking, alcohol drinking, and household income.	Lowest exposure concentration for a significant adverse health outcome response: 37.49-63.91 ug/g creatinine. Odds ratio (95% CI), for MnBP quartiles and elevated mean IMT (above the 75th percentile):Q2 vs Q1 = 1.09 (0.62,1.92)Q3 vs Q1 = 1.84 (1.08,3.15)Q4 vs Q1 = 2.80 (1.65,4.75). The highest two quartiles of MnBP were associated with significantly higher odds of elevated CIMT..	Su et. al 2019 5494915 Medium
Serum Total T3, T3/T4 ratio	Health Effect: Thyroid-serum thyroid hormones (TSH, total T3, total T4, T3/T4 ratio)-Non-cancer. Outcome measure: Chemiluminescent immunoassay	General public, Occupational workers. Adults (18+). China; Hunan Province. Female, Male. Cross-Sectional. PESS: Occupational, Geography/Site-specifi c (ex. home near exposure source or downstream of release sites). 317 adults from the Hunan Province, China (n=165 in the exposed group, n=152 in the unexposed group).. Unclear, prior to 2018.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured concurrently with outcome.	Linear Regression. Confounders adjusted for: age, gender, smoking status, alcohol use, BMI and years of local residence.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Regression coefficient (95% CI) for T3/T4 ratio per 1-unit increase in MEHP in all participants:0.043 (0.002, 0.083)Regression coefficient (95% CI) for total T3 per 1-unit increase in MEHHP in all participants:0.049 (0.017, 0.081)Regression coefficient (95% CI) for T3/T4 ratio per 1-unit increase in MEHHP in all participants:0.053 (0.019, 0.087)Regression coefficient (95% CI) for T3/T4 ratio per 1-unit increase in MEOHP in all participants:0.038 (0.000, 0.077). Slight but positive negative associations were observed between DEHP metabolites and thyroid hormone levels (T3, T3/T4 ratio). In dose-response analysis, significant linear and non-linear associations were found between:MEHP and Total T3, MEHP and T3/T4 ratio, MEHHP and Total T3, MEHHP and T3/T4 ratio, MEOHP and T3/T4..	Wang et. al 2018 4728615 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Serum Total T3, T3/T4 ratio	Health Effect: Thyroid-serum thyroid hormones (TSH, total T3, total T4, T3/T4 ratio)-Non-cancer. Outcome measure: Chemiluminescent immunoassay	General public, Occupational workers. Adults (18+). China; Hunan Province. Female, Male. Cross-Sectional. PESS: Occupational, Geography/Site-specifi c (ex. home near exposure source or downstream of release sites). 317 adults from the Hunan Province, China (n=165 in the exposed group, n=152 in the unexposed group).. Unclear, prior to 2018.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured concurrently with outcome.	Linear Regression. Confounders adjusted for: age, gender, smoking status, alcohol use, BMI and years of local residence.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Regression coefficient (95% CI) for Total T3 per 1-unit increase in MBP in all participants:0.025 (0.003, 0.047)Regression coefficient (95% CI) for T3/T4 ratio per 1-unit increase in MBP in all participants:0.028 (0.004, 0.051). Slight but positive negative associations were observed between MBP and thyroid hormone levels (T3, T3/T4 ratio). No dose-response relationships were observed..	Wang et. al 2018 4728615 Medium
Percentage changes in serum thyroid hormones TSH, FT3, and FT4	Health Effect: Thyroid-Changes in serum thyroid hormones TSH, FT3, FT4-Non-cancer-Reproductive/Developmental-Semen quality parameters (volume, concentration, progressive motility, total motility, total count, and percentage of normal morphology)-Non-cancer. Outcome measure: TSH, FT3, and FT4 were measured in serum using electrochemistry immunity analytical method	Patients in clinics. Adults (18+). China; Wuhan. Male. Cross-Sectional. PESS: Studies focusing on reproductive parameters. 509 males recruited from a single reproductive hospital center in Wuhan, China. 2013.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured simultaneously with outcome measures.	Linear Regression. Confounders adjusted for: urinary creatinine, BMI, smoking status, daily cigarette consumption.	Lowest exposure concentration for a significant adverse health outcome response: Fourth quartile. Percent change in TSH (95% CI) for Q4 vs. Q1: -15% (-27%, -1.4%). Significant dose-dependent relationships were found for %MEHP quartiles with decreasing TSH for the 4th vs 1st quartiles as well as for trend (p=0.03)..	Wang et. al 2018 4728614 Medium

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Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Anopenile distance (APD), Anoclitoral distance (ACD)	Health Effect: Reproductive/Developmental-anopenile distance (APD), anoscrotal distance (ASD), anoclitoral distance (ACD), anofourchette distance (AFD)-Non-cancer. Outcome measure: Clinical measurement taken at birth	General public, Pregnant people. Infant (0-1), Adults (18+). United States; Charleston, South Carolina. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters, Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). 380 infants in Charleston, South Carolina with maternal urinary phthalate metabolite measures (n = 222 males; n = 158 females). Recruitment: 2011-2014; follow-up at birth.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (18-22 weeks).	Linear Regression. Confounders adjusted for: maternal age, education, cigarette smoking, weigh percentile (z-scroe).	Lowest exposure concentration for a significant adverse health outcome response: Tertiles of MBP [Specific ranges not provided; mean (SD) ng/mL in all infants = 27.5 (73.5)]. Beta (95% CI) for anopenile distance:2nd tertile vs. 1st tertile of MBP = -2.30 (-4.30, -0.31)3rd tertile vs. 1st tertile of MBP= -2.61 (-4.77, -0.44)2nd tertile vs. 1st tertile of MBP (white infants only) = -2.77 (-5.45, -0.10)3rd tertile vs. 1st tertile of MBP (white infants only)= -3.66 (-7.16, -0.15)Beta (95% CI) for anoclitoral distance:3rd tertile vs. 1st tertile of MBP (African-American infants only)= -2.57 (-4.82, -0.32). Significant negative associations between prenatal MBP and anopenile distance in all infants, and in white infants only, by tertiles of MBP. Results for African American infants are mildly negative but not significant. A significant negative association was also reported for prenatal MBP and anoclitoral distance in African-American infants only, for the 3rd tertile compared to the 1st (2nd tertile negative but not significant). No significant results for other AGD measures..	Wenzel et. al 2018 4728953 Medium

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Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Anopenile distance (APD)	Health Effect: Reproductive/Developmental-anopenile distance (APD), anoscrotal distance (ASD), anoclitoral distance (ACD), anofourchette distance (AFD)-Non-cancer. Outcome measure: Clinically measured at birth	General public, Pregnant people. Infant (0-1), Adults (18+). United States; Charleston, South Carolina. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters, Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). 380 infants in Charleston, South Carolina with maternal urinary phthalate metabolite measures (n = 222 males; n = 158 females). Recruitment: 2011-2014; follow-up at birth.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (18-22 weeks).	Linear Regression. Confounders adjusted for: maternal age, race education, cigarette smoking, weight percentile (Z-score).	Lowest exposure concentration for a significant adverse health outcome response: Tertiles of sum DEHP [Specific ranges not provided; mean (SD) nmol/L in all infants = 206 (478)]. Beta (95% CI) for anopenile distance:3rd vs. 1st tertile of sum DEHP: -2.65 (-4.73, -0.56). Significant decrease in APD for the 3rd tertile of sum DEHP compared to the 1st tertile. 2nd tertile analysis also had a non-significant decrease. No significant findings when stratified by race, or for other anogenital distance measures..	Wenzel et. al 2018 4728953 Medium

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Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Anopenile distance (APD); Anoclitoral distance (ACD); Anofourhcette distance (AFD); Anogential distance (AGD)	Health Effect: Reproductive/Developmental-anopenile distance (APD), anoscrotal distance (ASD), anoclitoral distance (ACD), anofourchette distance (AFD)-Non-cancer. Outcome measure: Clinically measured at birth	General public, Pregnant people. Infant (0-1), Adults (18+). United States; Charleston, South Carolina. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters, Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). 380 infants in Charleston, South Carolina with maternal urinary phthalate metabolite measures (n = 222 males; n = 158 females). Recruitment: 2011-2014; follow-up at birth.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (18-22 weeks).	Linear Regression. Confounders adjusted for: maternal age, race education, cigarette smoking, weight percentile (Z-score).	Lowest exposure concentration for a significant adverse health outcome response: Continuous MEHP [mean (SD) ng/mL in all infants = 5.9 (13.6)]. Beta (95% CI) for anopenile distance:per ln-ng/mL increase in MEHP: -1.57 (-2.93, -0.20)Beta (95% CI) for anogenital distance:per ln-ng/mL increase in MEHP (African-American infants only): -2.07 (-4.05, -0.08)Beta (95% CI) for anoclitoral distance:3rd vs. 1st tertile of MEHP: -2.45 (-4.42, -0.48)Beta (95% CI) for anofourchette distance:2nd vs. 1st tertile of MEHP: -1.16 (-2.30, -0.01). Significant decrease in APD per increase in MEHP, and significant decreases in ACD and AFD by specific tertiles of MEHP. Non-significant tertiles showed similar directions of effect. No significant results for other AGD measures..	Wenzel et. al 2018 4728953 Medium

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Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Anopenile distance (APD)	Health Effect: Reproductive/Developmental-anopenile distance (APD), anoscrotal distance (ASD), anoclitoral distance (ACD), anofourchette distance (AFD)-Non-cancer. Outcome measure: Clinically measured at birth	General public, Pregnant people. Infant (0-1), Adults (18+). United States; Charleston, South Carolina. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters, Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). 380 infants in Charleston, South Carolina with maternal urinary phthalate metabolite measures (n = 222 males; n = 158 females). Recruitment: 2011-2014; follow-up at birth.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (18-22 weeks).	Linear Regression. Confounders adjusted for: maternal age, race education, cigarette smoking, weight percentile (Z-score).	Lowest exposure concentration for a significant adverse health outcome response: Tertiles of MEOHP [Specific ranges not provided; mean (SD) ng/mL in all infants = 9.6 (27.6)]. Beta (95% CI) for anopenile distance:2nd vs. 1st tertile of MEOHP: -2.55 (-4.62, -0.47)3rd vs. 1st tertile of MEOHP: -2.82 (-4.82, -0.82)3rd vs. 1st tertile of MEOHP (white infants only): -3.37 (-6.51, -0.22)3rd vs. 1st tertile of MEOHP (African-American infants only): -2.70 (-5.33, -0.06). Significant decrease in APD per tertiles of MEOHP. Results were maintained for the 3rd. vs. 1st tertile when stratified by infant race. No significant results for other AGD measures..	Wenzel et. al 2018 4728953 Medium

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Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Anopenile distance (APD)	Health Effect: Reproductive/Developmental-anopenile distance (APD), anoscrotal distance (ASD), anoclitoral distance (ACD), anofourchette distance (AFD)-Non-cancer. Outcome measure: Clinically measured at birth	General public, Pregnant people. Infant (0-1), Adults (18+). United States; Charleston, South Carolina. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters, Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). 380 infants in Charleston, South Carolina with maternal urinary phthalate metabolite measures (n = 222 males; n = 158 females). Recruitment: 2011-2014; follow-up at birth.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (18-22 weeks).	Linear Regression. Confounders adjusted for: maternal age, race education, cigarette smoking, weight percentile (Z-score).	Lowest exposure concentration for a significant adverse health outcome response: Tertiles of MEHHP [Specific ranges not provided; mean (SD) ng/mL in all infants = 12.4 (32.3)]. Beta (95% CI) for anopenile distance:2nd vs. 1st tertile of MEHHP: -2.31 (-4.37, -0.25)3rd vs. 1st tertile of MEHHP: -2.69 (-4.76, -0.63)3rd vs. 1st tertile of MEHHP (white infants only): -3.45(-6.75, -0.15). Significant decrease in APD per tertiles of MEHHP. Results were maintained for the 3rd. vs. 1st tertile in white infants only. No significant results for other AGD measures..	Wenzel et. al 2018 4728953 Medium

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Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Overweight/obesity	Health Effect: Nutritional/Metabolic-Overweight/obesity-Non-cancer. Outcome measure: Direct measurement of height and weight	General public. Middle childhood (6-11), Teens (12-17). China; Shanghai. Female, Male. Nested Case-Control. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Overweight and obese children and controls from a school district in Shanghai (enrolled n=170; used in analysis n=149). Puberty Timing and Health Effects in Chinese Children (PTHEC). 2011.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured concurrently with outcome.	Logistic Regression. Confounders adjusted for: phthalate metabolite concentrations, chronological age, gender, puberty onset, daily energy intake, physical activity, and socioeconomic level.	Lowest exposure concentration for a significant adverse health outcome response: Continuous [median (ug/L) among controls = 13.68; median (ug/L) among cases = 18.68]. OR (95% CI) per ln-unit increase MnBP = 1.586 (1.043, 2.412). Significant positive association between MnBP concentrations and overweight/obesity in children..	Xia et. al 2018 4829216 Medium

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Human Health Hazard Epidemology Extraction

Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Wechsler Preschool and Primary Scale of Intelligence (Chinese version) scores: 5 subscales: verbal comprehension index, visual space index, fluid reasoning index, working memory index, processing speed index.	Health Effect: Neurological/Behavioral-Intelligent quotient (IQ) scores-Non-cancer-Reproductive/Developmental-Intelligent quotient (IQ) scores-Non-cancer. Outcome measure: 2 examiners trained by licensed clinical psychologist administered Wechsler IQ test. Raw data submitted to blinded researcher for calculation of each participant's IQ scores.	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11). China; Ma'anshan. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Pregnant women from Ma'anshan Birth Cohort recruited during pregnancy (n=2128). Ma'anshan Birth Cohort (MABC). Recruitment: 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during pregnancy. Infant exposure measured at 42 days, 3 months, 6 months, 9 months, and 12 months. Children followed up continuously from age 1.5 every 6 months until age 6..	Linear mixed model. Confounders adjusted for: maternal age, maternal IQ, pre-pregnancy BMI, parity, household income, sunscreen use, pregnancy willingness, breastfeeding duration, urinary creatinine concentration.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) per 1 ln-transformed unit increase for following subscales. Maternal MBP (Total), VCI: -0.30 (-0.60, 0.0), p=0.05; VSI: -0.32 (-0.62, -0.01), p=0.04; FSIQ: -0.31 (-0.57, -0.04), p=0.02. Maternal MBP (boys), VSI: -0.56 (-1.01, -0.12), p=0.01; FSIQ: -0.38 (-0.76, 0.0), p=0.05. Maternal MBP (first trimester), VCI: -0.56 (-1.09, -0.02), p=0.04; VSI: -0.60 (-1.15, -0.05), p=0.03; FSIQ: -0.49 (-0.97, -0.01), p=0.04.. Every ln-unit increase in maternal MBP (total) was associated with a 0.30 point decrease in VCI, VSI, and FSIQ. Every ln-unit increase in maternal MBP among boys was associated with a 0.56 point decrease in VSI and a 0.38 point decrease in FSIQ. Every ln-unit increase in maternal MBP for the first trimester is associated with a 0.56 point decrease in VCI, a 0.60 point decrease in VSI, and a 0.49 point decrease in FSIQ..	Zhu et. al 2020 9644525 Medium

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Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Wechsler Preschool and Primary Scale of Intelligence (Chinese version) scores: 5 subscales: verbal comprehension index, visual space index, fluid reasoning index, working memory index, processing speed index.	Health Effect: Neurological/Behavioral-Intelligent quotient (IQ) scores-Non-cancer-Reproductive/Developmental-Intelligent quotient (IQ) scores-Non-cancer. Outcome measure: 2 examiners trained by licensed clinical psychologist administered Wechsler IQ test. Raw data submitted to blinded researcher for calculation of each participant's IQ scores.	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11). China; Ma'anshan. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Pregnant women from Ma'anshan Birth Cohort recruited during pregnancy (n=2128). Ma'anshan Birth Cohort (MABC). Recruitment: 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during pregnancy. Infant exposure measured at 42 days, 3 months, 6 months, 9 months, and 12 months. Children followed up continuously from age 1.5 every 6 months until age 6..	Linear mixed model. Confounders adjusted for: maternal age, maternal IQ, pre-pregnancy BMI, parity, household income, sunscreen use, pregnancy willingness, breastfeeding duration, urinary creatinine concentration.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) per 1 ln-transformed unit increase for following subscales. Maternal MBzP (Total), VCI: 0.23 (0.01, 0.44), p=0.04. Maternal MBzP (boys), VCI: 0.45 (0.14, 0.076), p<0.01. Maternal MBzP (third trimester), VCI: 0.48 (0.03, 0.92), p=0.04.. Every ln-unit increase in maternal MBzP (total) was associated with a 0.23 point increase in VCI. Every ln-unit increase in maternal MBzP among boys was associated with a 0.45 point increase in VCI. Every ln-unit increase in maternal MBzP for the third trimester is associated with a 0.48 point increase in VCI..	Zhu et. al 2020 9644525 Medium

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Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Wechsler Preschool and Primary Scale of Intelligence (Chinese version) scores: 5 subscales: verbal comprehension index, visual space index, fluid reasoning index, working memory index, processing speed index.	Health Effect: Neurological/Behavioral-Intelligent quotient (IQ) scores-Non-cancer-Reproductive/Developmental-Intelligent quotient (IQ) scores-Non-cancer. Outcome measure: 2 examiners trained by licensed clinical psychologist administered Wechsler IQ test. Raw data submitted to blinded researcher for calculation of each participant's IQ scores.	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11). China; Ma'anshan. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Pregnant women from Ma'anshan Birth Cohort recruited during pregnancy (n=2128). Ma'anshan Birth Cohort (MABC). Recruitment: 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during pregnancy. Infant exposure measured at 42 days, 3 months, 6 months, 9 months, and 12 months. Children followed up continuously from age 1.5 every 6 months until age 6..	Linear mixed model. Confounders adjusted for: maternal age, maternal IQ, pre-pregnancy BMI, parity, household income, sunscreen use, pregnancy willingness, breastfeeding duration, urinary creatinine concentration.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) per 1 ln-transformed unit increase for following subscales. Maternal MEHP (Total), FSIQ: 0.31 (0.04, 0.57), p=0.03. Maternal MEHP (boys), FSIQ: 0.51 (0.1, 0.92), p=0.01.. Every ln-unit increase in maternal MEHP (total) was associated with a 0.31 point increase in FSIQ. Every ln-unit increase in maternal MEHP among boys was associated with a 0.51 point increase in FSIQ..	Zhu et. al 2020 9644525 Medium

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Diethylhexyl Phthalate Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Wechsler Preschool and Primary Scale of Intelligence (Chinese version) scores: 5 subscales: verbal comprehension index, visual space index, fluid reasoning index, working memory index, processing speed index.	Health Effect: Neurological/Behavioral-Intelligent quotient (IQ) scores-Non-cancer-Reproductive/Developmental-Intelligent quotient (IQ) scores-Non-cancer. Outcome measure: 2 examiners trained by licensed clinical psychologist administered Wechsler IQ test. Raw data submitted to blinded researcher for calculation of each participant's IQ scores.	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11). China; Ma'anshan. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Pregnant women from Ma'anshan Birth Cohort recruited during pregnancy (n=2128). Ma'anshan Birth Cohort (MABC). Recruitment: 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during pregnancy. Infant exposure measured at 42 days, 3 months, 6 months, 9 months, and 12 months. Children followed up continuously from age 1.5 every 6 months until age 6..	Linear mixed model. Confounders adjusted for: maternal age, maternal IQ, pre-pregnancy BMI, parity, household income, sunscreen use, pregnancy willingness, breastfeeding duration, urinary creatinine concentration.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) per 1 ln-transformed unit increase for following subscales. Maternal MEOHP (Total), WMI: 0.39 (0.01, 0.77), p=0.05.. Every ln-unit increase in maternal MEOHP (total) was associated with a 0.39 point increase in WMI..	Zhu et. al 2020 9644525 Medium

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Birth weight for boys	Health Effect: Reproductive/Developmental-Birth weight, birth length, birth weight z-score, ponderal index-Non-cancer-Nutritional/Metabolic-Birth weight, birth length, birth weight z-score, ponderal index-Non-cancer. Outcome measure: Measured with an electronic scale	Pregnant people. Infant (0-1), Adults (18+). China; Wuhan City. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women and their infants with phthalate metabolite measurements (enrolled = 1002, used in analysis = 525. Health Baby Cohort (HBC). 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via monitoring within three days before or after delivery.	Linear Regression. Confounders adjusted for: maternal age, prepregnancy BMI, gestational age, educational level, parity, passive smoking.	Lowest exposure concentration for a significant adverse health outcome response: Continuous; GM (95% CI): 171 ug/g creatinine (163, 179). Beta (95% confidence interval) per 1-ln increase sum DEHP: 47.0 (3.9, 90.2). Significant associations between sum of DEHP metabolites and birth weight in boys..	Zhu et. al 2018 4728491 Medium
Birth weight for boys	Health Effect: Reproductive/Developmental-Birth weight, birth length, birth weight z-score, ponderal index-Non-cancer-Nutritional/Metabolic-Birth weight, birth length, birth weight z-score, ponderal index-Non-cancer. Outcome measure: Measured with an electronic scale	Pregnant people. Infant (0-1), Adults (18+). China; Wuhan City. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women and their infants with phthalate metabolite measurements (enrolled = 1002, used in analysis = 525. Health Baby Cohort (HBC). 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via monitoring within three days before or after delivery.	Linear Regression. Confounders adjusted for: maternal age, prepregnancy BMI, gestational age, educational level, parity, passive smoking.	Lowest exposure concentration for a significant adverse health outcome response: Continuous; GM (95% CI): 18.5 ug/g creatinine (17.6, 19.5). Beta value (95% confidence interval) per 1-ln increase in MECPP: 59.8 (19.8, 99.9). Significant associations between DEHP metabolite MECPP and birth weight in boys..	Zhu et. al 2018 4728491 Medium

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Metabolite: Sum of DEHP metabolites [Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP); Diethylhexyl Phthalate

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Mono-(2-ethyl-5-carboxypentyl)phthalate (MECPP)]

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Birth weight for boys	Health Effect: Reproductive/Developmental-Birth weight, birth length, birth weight z-score, ponderal index-Non-cancer-Nutritional/Metabolic-Birth weight, birth length, birth weight z-score, ponderal index-Non-cancer. Outcome measure: Measured with an electronic scale	Pregnant people. Infant (0-1), Adults (18+). China; Wuhan City. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women and their infants with phthalate metabolite measurements (enrolled = 1002, used in analysis = 525). Health Baby Cohort (HBC). 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via monitoring within three days before or after delivery.	Linear Regression. Confounders adjusted for: maternal age, prepregnancy BMI, gestational age, educational level, parity, passive smoking.	Lowest exposure concentration for a significant adverse health outcome response: Continuous; GM (95% CI): 14.8 ug/g creatinine (14.0, 15.5). Beta value (95% confidence interval) per 1-ln increase in MEOHP: 42.2 (1.2, 83.3). Significant associations between DEHP metabolite MEOHP and birth weight in boys..	Zhu et. al 2018 4728491 Medium
Birth weight z-scores in boys	Health Effect: Reproductive/Developmental-Birth weight, birth length, birth weight z-score, ponderal index-Non-cancer-Nutritional/Metabolic-Birth weight, birth length, birth weight z-score, ponderal index-Non-cancer. Outcome measure: Calculated according to the INTERGROWTH-21st Newborn Birth Weight Standards and Z Scores	Pregnant people. Infant (0-1), Adults (18+). China; Wuhan City. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women and their infants with phthalate metabolite measurements (enrolled = 1002, used in analysis = 525. Health Baby Cohort (HBC). 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via monitoring within three days before or after delivery.	Linear Regression. Confounders adjusted for: maternal age, prepregnancy BMI, educational level, parity, passive smoking.	Lowest exposure concentration for a significant adverse health outcome response: Continuous; GM (95% CI): 171 ug/g creatinine (163, 179). Beta (95% confidence interval) per 1-ln increase in sum DEHP: 0.12 (0.02, 0.22). Significant associations between sum of DEHP metabolites and birth weight z-scores in boys.	Zhu et. al 2018 4728491 Medium

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Metabolite: Sum of DEHP metabolites [Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP); Diethylhexyl Phthalate

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Mono-(2-ethyl-5-carboxypentyl)phthalate (MECPP)]

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Birth weight z-score in boys	Health Effect: Reproductive/Developmental-Birth weight, birth length, birth weight z-score, ponderal index-Non-cancer-Nutritional/Metabolic-Birth weight, birth length, birth weight z-score, ponderal index-Non-cancer. Outcome measure: Calculated according to the INTERGROWTH-21st Newborn Birth Weight Standards and Z Scores	Pregnant people. Infant (0-1), Adults (18+). China; Wuhan City. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women and their infants with phthalate metabolite measurements (enrolled = 1002, used in analysis = 525). Health Baby Cohort (HBC). 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via monitoring within three days before or after delivery.	Linear Regression. Confounders adjusted for: maternal age, prepregnancy BMI, gestational age, educational level, parity, passive smoking.	Lowest exposure concentration for a significant adverse health outcome response: Continuous; GM (95% CI): 18.5 ug/g creatinine (17.6, 19.5). Beta (95% confidence interval) per 1-ln increase in MECPP: 0.15 (0.06, 0.25). Significant associations between DEHP metabolite MECPP and birth weight z-score in boys..	Zhu et. al 2018 4728491 Medium
Birth weight z-score for boys	Health Effect: Reproductive/Developmental-Birth weight, birth length, birth weight z-score, ponderal index-Non-cancer-Nutritional/Metabolic-Birth weight, birth length, birth weight z-score, ponderal index-Non-cancer. Outcome measure: Calculated according to the INTERGROWTH-21st Newborn Birth Weight Standards and Z Scores	Pregnant people. Infant (0-1), Adults (18+). China; Wuhan City. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women and their infants with phthalate metabolite measurements (enrolled = 1002, used in analysis = 525). Health Baby Cohort (HBC). 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via monitoring within three days before or after delivery.	Linear Regression. Confounders adjusted for: maternal age, prepregnancy BMI, gestational age, educational level, parity, passive smoking.	Lowest exposure concentration for a significant adverse health outcome response: Continuous; GM (95% CI): 14.8 ug/g creatinine (14.0, 15.5). Beta (95% confidence interval) per 1-ln increase in MEOHP: 0.11 (0.01, 0.20). Significant associations between DEHP metabolite MEOHP and birth weight in boys..	Zhu et. al 2018 4728491 Medium

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Metabolite: Sum of DEHP metabolites [Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP); Diethylhexyl Phthalate

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Mono-(2-ethyl-5-carboxypentyl)phthalate (MECPP)]

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Ponderal index (kg/m3) in boys	Health Effect: Reproductive/Developmental-Birth weight, birth length, birth weight z-score, ponderal index-Non-cancer-Nutritional/Metabolic-Birth weight, birth length, birth weight z-score, ponderal index-Non-cancer. Outcome measure: Ponderal index was assigned as a ratio of birth weight in kilograms to length in meters cubed (kg/m3)	Pregnant people. Infant (0-1), Adults (18+). China; Wuhan City. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women and their infants with phthalate metabolite measurements (enrolled = 1002, used in analysis = 525). Health Baby Cohort (HBC). 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via monitoring within three days before or after delivery.	Linear Regression. Confounders adjusted for: maternal age, prepregnancy BMI, gestational age, educational level, parity, passive smoking.	Lowest exposure concentration for a significant adverse health outcome response: Continuous; GM (95% CI): 18.5 ug/g creatinine (17.6, 19.5). Beta (95% confidence interval) per 1-ln increase in MECPP: 0.25 (0.03, 0.47). Significant associations between DEHP metabolite MECPP and ponderal index in boys.	Zhu et. al 2018 4728491 Medium

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Birth weight	Health Effect: Reproductive/Developmental- Birth weight, low birth weight, high birth weight- Non-cancer. Outcome measure: Delivery records	General public, Pregnant people. Infant (0-1), Adults (18+). China; Ma'anshan, Anhui, China. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women recruited from Ma'anshan Women and Children's Health Care Hospital and their infants (Enrolled n=3,474, Used in analysis n=3,103. May 2013-September 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure during the three trimesters of pregnancy.	Linear mixed model. Confounders adjusted for: Pre-BMI, gestational weight gain, pregnancy complication, education level and urinary creatinine concentration.	Lowest exposure concentration for a significant adverse health outcome response: continuous; mean MEOHP (ng/mL) in 1st, 2nd, and 3rd trimesters = 2.01, 1.98, 1.54. Regression coefficient (95% CI) per 1-ln unit increase in MEOHP among low birth weight infants: -63.224 (-109.463, -16.985)Regression coefficient (95% CI) per 1-ln unit increase in MEOHP among low birth weight male infants: -111.206 (-188.298, -34.115). Increased MEOHP was associated with decreased birth weights among low birth weight infants, overall and in males..	Zhang et. al 2018 4728493 Medium
Birth weight	Health Effect: Reproductive/Developmental- Birth weight, low birth weight, high birth weight- Non-cancer. Outcome measure: Delivery records	General public, Pregnant people. Infant (0-1), Adults (18+). China; Ma'anshan, Anhui, China. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women recruited from Ma'anshan Women and Children's Health Care Hospital and their infants (Enrolled n=3,474, Used in analysis n=3,103. May 2013-September 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure during the three trimesters of pregnancy.	Linear mixed model. Confounders adjusted for: Pre-BMI, gestational weight gain, pregnancy complication, education level and urinary creatinine concentration.	Lowest exposure concentration for a significant adverse health outcome response: continuous; mean MBP (ng/mL) in 1st, 2nd, and 3rd trimesters = 3.96, 3,73, and 3.43. Regression coefficient (95% CI) per 1-ln unit increase in MBP among normal birth weight males: 10.438 (0.502, 20.374). Increased MBP was associated with increased birth weight among male infants who had "normal" birth weights. A significant sex interaction was reported for MBP and birth weight of infants. However, no significant findings were negative, non-significant for all infants, females, and when stratified by low or high birth weight status..	Zhang et. al 2018 4728493 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Birth weight	Health Effect: Reproductive/Developmental- Birth weight, low birth weight, high birth weight- Non-cancer. Outcome measure: Delivery records	General public, Pregnant people. Infant (0-1), Adults (18+). China; Ma'anshan, Anhui, China. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women recruited from Ma'anshan Women and Children's Health Care Hospital and their infants (Enrolled n=3,474, Used in analysis n=3,103. May 2013-September 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure during the three trimesters of pregnancy.	Linear mixed model. Confounders adjusted for: Pre-BMI, gestational weight gain, pregnancy complication, education level and urinary creatinine concentration.	Lowest exposure concentration for a significant adverse health outcome response: continuous; mean sum DEHP (ng/mL) in 1st, 2nd, and 3rd trimesters = 2.85, 2.94, 2.47. Regression coefficient (95% CI) per 1-ln unit increase in sum DEHP among low birth weight infants: -69.700 (-116.131, -23.867)Regression coefficient (95% CI) per 1-ln unit increase in sum DEHP among low birth weight male infants: -108.348 (-180.006, -36.691)Regression coefficient (95% CI) per 1-ln unit increase in sum DEHP among low birth weight female infants: –52.267 (-103.783, -0.751)Regression coefficient (95% CI) per 1-ln unit increase in sum DEHP among high birth weight female infants: -33.590 (-61.858, -5.323). Increased sum DEHP metabolites was associated with decreased birth weights among low birth weight infants, overall and stratified by sex. A significant negative association was also observed among high birth weight females..	Zhang et. al 2018 4728493 Medium
Birth weight	Health Effect: Reproductive/Developmental- Birth weight, low birth weight, high birth weight- Non-cancer. Outcome measure: Delivery records	General public, Pregnant people. Infant (0-1), Adults (18+). China; Ma'anshan, Anhui, China. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women recruited from Ma'anshan Women and Children's Health Care Hospital and their infants (Enrolled n=3,474, Used in analysis n=3,103. May 2013-September 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure during the three trimesters of pregnancy.	Linear mixed model. Confounders adjusted for: Pre-BMI, gestational weight gain, pregnancy complication, education level and urinary creatinine concentration.	Lowest exposure concentration for a significant adverse health outcome response: continuous; mean MEHP (ng/mL) in 1st, 2nd, and 3rd trimesters = 0.98, 1.40, 0.93. Regression coefficient (95% CI) per 1-ln unit increase in MEHP among low birth weight infants: -42.348 (-81.618, -3.079)Regression coefficient (95% CI) per 1-ln unit increase in MEHP among low birth weight male infants: -82.856 (-148.059, -17.654)Regression coefficient (95% CI) per 1-ln unit increase in MEHP among normal birth weight male infants: 13.223 (2.386, 24.061)Regression coefficient (95% CI) per 1-ln unit increase in MEHP among high birth weight infants: -16.580 (-31.892, -1.268). Increased MEHP was associated with decreased birth weights among low birth weight infants, overall and in males, and among all high birth weight infants. A significant positive association was also observed among normal birth weight males..	Zhang et. al 2018 4728493 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Birth weight	Health Effect: Reproductive/Developmental- Birth weight, low birth weight, high birth weight- Non-cancer. Outcome measure: Delivery records	General public, Pregnant people. Infant (0-1), Adults (18+). China; Ma'anshan, Anhui, China. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women recruited from Ma'anshan Women and Children's Health Care Hospital and their infants (Enrolled n=3,474, Used in analysis n=3,103. May 2013-September 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure during the three trimesters of pregnancy.	Linear mixed model. Confounders adjusted for: Pre-BMI, gestational weight gain, pregnancy complication, education level and urinary creatinine concentration.	Lowest exposure concentration for a significant adverse health outcome response: continuous; mean MEHHP (ng/mL) in 1st, 2nd, and 3rd trimesters = 1.71, 1.85, 1.38. Regression coefficient (95% CI) per 1-ln unit increase in MEHHP among low birth weight infants: -50.485 (-86.258, -14.712)Regression coefficient (95% CI) per 1-ln unit increase in MEHHP among low birth weight male infants: -110.055 (-171.952, -48.139)Regression coefficient (95% CI) per 1-ln unit increase in MEHHP among high birth weight female infants: -28.701 (-54.490, -2.813). Increased MEHHP was associated with decreased birth weights among low birth weight infants, overall and in males, and among high birth weight female infants..	Zhang et. al 2018 4728493 Medium

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Serum T3	Health Effect: Thyroid- Maternal serum thyroid-stimulating hormone (TSH), triiodothyronine (T3), thyroxine (T4), and free T4 (FT4) in each trimester. Cord serum thyroid-stimulating hormone (TSH), triiodothyronine (T3), thyroxine (T4), and free T4 (FT4).-Non-cancer. Outcome measure: Serum concentrations via electrochemiluminescence immunoassay	General public, Pregnant people. Infant (0-1), Adults (18+). Taiwan; Tainan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). 98 healthy mother-child pairs (mean maternal age 35 years) from pregnancies screened using amniocentesis. Tainan birth cohort study (TBCS). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during each trimester of pregnancy.	Linear mixed model. Confounders adjusted for: maternal age, gestational age at sample collection, urinary creatinine, and serum T4-binding globulin (TBG).	Lowest exposure concentration for a significant adverse health outcome response: Continuous; mean MCMHP (ng/mL) at visits 1, 2, and 3: 0.34, 0.92, 0.33. Beta (95% CI) per unit increase in ln-MCMHP repeated measures: maternal ln-T3 = -0.018 (-0.034, -0.002), p<0.05.. Urinary maternal MCMHP had a significant inverse association with maternal serum T3. No significant results were reported for other maternal thyroid hormones, or cord serum thyroid hormones..	Huang et. al 2018 4728500 Medium
Serum T3	Health Effect: Thyroid- Maternal serum thyroid-stimulating hormone (TSH), triiodothyronine (T3), thyroxine (T4), and free T4 (FT4) in each trimester. Cord serum thyroid-stimulating hormone (TSH), triiodothyronine (T3), thyroxine (T4), and free T4 (FT4).-Non-cancer. Outcome measure: Serum concentrations via electrochemiluminescence immunoassay	General public, Pregnant people. Infant (0-1), Adults (18+). Taiwan; Tainan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). 98 healthy mother-child pairs (mean maternal age 35 years) from pregnancies screened using amniocentesis. Tainan birth cohort study (TBCS). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during each trimester of pregnancy.	Linear mixed model. Confounders adjusted for: maternal age at enrollment, urinary creatinine.	Lowest exposure concentration for a significant adverse health outcome response: Continuous; mean MnBP (ng/mL) for visits 1, 2, and 3: 6.06, 4.87, 15.54. Beta (95%) CI per unit increase in ln-MnBP at visit 2: cord ln-T3 = 0.054 (0.008, 0.100), p<0.05.. MnBP at visit 2 was associated with significantly higher cord T3., and marginally non-significant cord free T4. No significant results were reported for other cord thyroid hormones or for maternal thyroid hormones..	Huang et. al 2018 4728500 Medium

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Metabolite: Sum DEHP metabolites [Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP); Diethylhexyl Phthalate Mono-(2-ethyl-5-carboxypentyl)phthalate (MECPP); Mono-[2-(carboxymethyl)hexyl]phthalate (MCMHP)]

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Serum TSH and Free T4	Health Effect: Thyroid-Maternal serum thyroid-stimulating hormone (TSH), triiodothyronine (T3), thyroxine (T4), and free T4 (FT4) in each trimester. Cord serum thyroid-stimulating hormone (TSH), triiodothyronine (T3), thyroxine (T4), and free T4 (FT4).-Non-cancer. Outcome measure: Serum concentrations via electrochemiluminescence immunoassay	General public, Pregnant people. Infant (0-1), Adults (18+). Taiwan; Tainan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). 98 healthy mother-child pairs (mean maternal age 35 years) from pregnancies screened using amniocentesis. Tainan birth cohort study (TBCS). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during each trimester of pregnancy.	Linear mixed model. Confounders adjusted for: maternal age, gestational age at sample collection, urinary creatinine, and serum T4-binding globulin (TBG).	Lowest exposure concentration for a significant adverse health outcome response: Continuous; mean MiBP (ng/mL) at visits 1, 2, and 3: 2.33, 5.66, 7.08. Beta (95% CI) per unit increase in ln-MiBP repeated measures: (i) maternal ln-TSH = -0.065 (-0.124, -0.005), $p<0.05$. (ii) maternal ln-Free T4 = 0.033 (0.018, 0.049), $p<0.01$.. MiBP was associated with significantly decreased maternal TSH and significantly increased maternal T4. No significant results were reported for other maternal thyroid hormones, or cord serum thyroid hormones..	Huang et. al 2018 4728500 Medium
Serum TSH	Health Effect: Thyroid-Maternal serum thyroid-stimulating hormone (TSH), triiodothyronine (T3), thyroxine (T4), and free T4 (FT4) in each trimester. Cord serum thyroid-stimulating hormone (TSH), triiodothyronine (T3), thyroxine (T4), and free T4 (FT4).-Non-cancer. Outcome measure: Serum concentrations via electrochemiluminescence immunoassay	General public, Pregnant people. Infant (0-1), Adults (18+). Taiwan; Tainan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). 98 healthy mother-child pairs (mean maternal age 35 years) from pregnancies screened using amniocentesis. Tainan birth cohort study (TBCS). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during each trimester of pregnancy.	Linear mixed model. Confounders adjusted for: maternal age, gestational age at sample collection, urinary creatinine, and serum T4-binding globulin (TBG).	Lowest exposure concentration for a significant adverse health outcome response: Continuous; mean MEOHP (ng/mL) at visits 1, 2, and 3: 3.41, 5.36, 8.38. Beta (95% CI) per unit increase in ln-MEOHP repeated measures: maternal ln-TSH = -0.083 (-0.157, -0.009), $p<0.05$.. Urinary maternal MEOHP had a significant inverse association with maternal TSH. No significant results were reported for other maternal thyroid hormones, or cord serum thyroid hormones..	Huang et. al 2018 4728500 Medium

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Metabolite: Sum DEHP metabolites [Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP); Mono-(2-ethyl-5-carboxypentyl)phthalate (MECPP); Mono-[2-(carboxymethyl)hexyl]phthalate (MCMHP)]
Diethylhexyl Phthalate

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Serum T3	Health Effect: Thyroid-Maternal serum thyroid-stimulating hormone (TSH), triiodothyronine (T3), thyroxine (T4), and free T4 (FT4) in each trimester. Cord serum thyroid-stimulating hormone (TSH), triiodothyronine (T3), thyroxine (T4), and free T4 (FT4).-Non-cancer. Outcome measure: Serum concentrations via electrochemiluminescence immunoassay	General public, Pregnant people. Infant (0-1), Adults (18+). Taiwan; Tainan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). 98 healthy mother-child pairs (mean maternal age 35 years) from pregnancies screened using amniocentesis. Tainan birth cohort study (TBCS). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during each trimester of pregnancy.	Linear mixed model. Confounders adjusted for: maternal age, gestational age at sample collection, urinary creatinine, and serum T4-binding globulin (TBG).	Lowest exposure concentration for a significant adverse health outcome response: Continuous; mean MECCP (ng/mL) at visits 1, 2, and 3: 6.15, 9.89, 12.46. Beta (95% CI) per unit increase in ln-MECCP repeated measures: maternal ln-T3 = -0.027 (-0.047, -0.006), p<0.05.. Urinary maternal MECCP had a significant inverse association with maternal serum T3. No significant results were reported for other maternal thyroid hormones, or cord serum thyroid hormones..	Huang et. al 2018 4728500 Medium

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Recurrent pregnancy loss	Health Effect: Reproductive/Developmental-Recurrent pregnancy loss-Non-cancer. Outcome measure: Diagnosed by a physician	Pregnant people. Adults (18+). Taiwan. Female. Case-Control. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Taiwanese women recruited at a hospital obstetrics and gynecology department (103 cases, 74 controls). 2013-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via biomonitoring (unspecified time frame).	Mann-Whitney U test.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Mann-Whitney test p-value for the difference in MCMHP for cases vs. controls = 0.042. Urinary levels of MCMHP were significantly higher among cases than controls..	Liao et. al 2018 4728516 Low

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Activated partial thrombo-plastin time (APTT)	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer-Immune/Hematological-Maternal hematologic parameters in pregnancy: total white blood cell counts (WBC), red blood cell counts (RBC), hemoglobin (Hb), and platelet counts (PLT)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Linear Regression. Confounders adjusted for: gestational age at sample collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron and folate supplementation during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: continuous. APTT (seconds) beta (95% CI) =0.211 (0.085, 0.338); p-FDR=0.0088. Significant positive associations were reported for ln-transformed MBP with APTT, including after FDR adjustment and after excluding several pregnancy complications..	Jiang et. al 2018 4728517 Medium
hemoglobin (Hb)	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Linear Regression. Confounders adjusted for: gestational age at sample collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron supplementation during pregnancy, infant sex.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Hb (g/L) beta (95% CI) = -0.530 (-0.922, -0.138), p-FDR =0.0216. Ln-MEHP was negatively associated with Hb, including after FDR adjustment and after excluding several pregnancy complications..	Jiang et. al 2018 4728517 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
hemoglobin (Hb)	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Linear Regression. Confounders adjusted for: gestational age at sample collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron supplementation during pregnancy, infant sex.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Hb (g/L) beta (95% CI) = -0.947 (-1.611, -0.282), p-FDR =0. 0053. Ln-MEOHP was negatively associated with Hb, including after FDR adjustment and after excluding several pregnancy complications..	Jiang et. al 2018 4728517 Medium
hemoglobin (Hb)	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Linear Regression. Confounders adjusted for: gestational age at sample collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron supplementation during pregnancy, infant sex.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Hb (g/L) beta (95% CI) = -1.048 (-1.737, -0.360), p-FDR =0. 0029. Ln-MECPP was negatively associated with Hb, including after FDR adjustment and after excluding several pregnancy complications..	Jiang et. al 2018 4728517 Medium
Anemia	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Logistic Regression. Confounders adjusted for: gestational age at samples collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron and folate supplementation during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for ln-MEHP and odds of anemia = 1.25 (1.12, 1.39), p-FDR < 0.0001. MEHP was positively and significantly associated with anemia in the third trimester..	Jiang et. al 2018 4728517 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Anemia	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Logistic Regression. Confounders adjusted for: gestational age at samples collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron and folate supplementation during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for ln-MEOHP and odds of anemia = 1.22 (1.03, 1.46, p-FDR=1.45. MEOHP was positively and significantly associated with anemia in the third trimester..	Jiang et. al 2018 4728517 Medium
Anemia	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Logistic Regression. Confounders adjusted for: gestational age at samples collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron and folate supplementation during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for ln-MECPP and odds of anemia = 1.22 (1.03, 1.46), p-FDR=0.033. MECPP was positively and significantly associated with anemia in the third trimester..	Jiang et. al 2018 4728517 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
gestational diabetes status, miRNA expression (miR-9-5p, miR-16-5p, miR-29a-3p, miR-330-3p)	Health Effect: Nutritional/Metabolic-gestational diabetes mellitus status, mRNA expression (miR-9-5p, miR-16-5p, miR-29a-3p, miR-330-3p)-Non-cancer. Outcome measure: Gestational diabetes was assessed using a 75-g two-hour oral glucose tolerance test. miRNA expression (serum) was measured using various laboratory techniques.	Patients in clinics, Pregnant people. Adults (18+). Mexico; Mexico City. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 40 pregnant women seeking care at a single prenatal facility in Mexico City (18 with gestational diabetes, 22 without gestational diabetes). not stated.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Mann-Whitney U test. Confounders adjusted for: none.	Lowest exposure concentration for a significant adverse health outcome response: continuous. MBP (not creatinine adjusted), among women without GDM:Spearman correlation coefficient for mir-29a: -0.7140 ($p<0.0001$) MBP (creatinine adjusted), among women without GDM:Spearman correlation coefficient for mir-29a: -0.5418 ($p<0.05$)MiBP (not creatinine adjusted) among women without GDM:Spearman correlation coefficient for mir-29a: -0.6719 ($p<0.01$). Among women without GDM, negative correlations were observed for MBP and MiBP and expression of mir-29a..	Martínez-Ibarra et. al 2019 5432795 Low
gestational diabetes status, miRNA expression (miR-9-5p, miR-16-5p, miR-29a-3p, miR-330-3p)	Health Effect: Nutritional/Metabolic-gestational diabetes mellitus status, mRNA expression (miR-9-5p, miR-16-5p, miR-29a-3p, miR-330-3p)-Non-cancer. Outcome measure: Gestational diabetes was assessed using a 75-g two-hour oral glucose tolerance test. miRNA expression (serum) was measured using various laboratory techniques.	Patients in clinics, Pregnant people. Adults (18+). Mexico; Mexico City. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 40 pregnant women seeking care at a single prenatal facility in Mexico City (18 with gestational diabetes, 22 without gestational diabetes). not stated.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Mann-Whitney U test. Confounders adjusted for: none.	Lowest exposure concentration for a significant adverse health outcome response: continuous. MBzP (creatinine adjusted), among women without GDM:Spearman correlation coefficient for mir-16: 0.4737 ($p<0.05$). Among women without GDM, MBzP was positively correlated with expression of mir-16..	Martínez-Ibarra et. al 2019 5432795 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
gestational diabetes status, miRNA expression (miR-9-5p, miR-16-5p, miR-29a-3p, miR-330-3p)	Health Effect: Nutritional/Metabolic-gestational diabetes mellitus status, mRNA expression (miR-9-5p, miR-16-5p, miR-29a-3p, miR-330-3p)-Non-cancer. Outcome measure: Gestational diabetes was assessed using a 75-g two-hour oral glucose tolerance test. miRNA expression (serum) was measured using various laboratory techniques.	Patients in clinics, Pregnant people. Adults (18+). Mexico; Mexico City. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 40 pregnant women seeking care at a single prenatal facility in Mexico City (18 with gestational diabetes, 22 without gestational diabetes). not stated.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Mann-Whitney U test. Confounders adjusted for: none.	Lowest exposure concentration for a significant adverse health outcome response: continuous. MEHP (creatinine adjusted), among women without GDM:Spearman correlation coefficient for mir-29a: 0.4912 ($p<0.05$). Among women without GDM, MEHP was positively correlated with expression of mir-29a..	Martínez-Ibarra et. al 2019 5432795 Low
Language development at 2 years of age	Health Effect: Neurological/Behavioral-Cognitive development, language development, motor development-Non-cancer. Outcome measure: Bayley Scales of Infant Development-Third Edition (Bayley-III)	Pregnant people. Infant (0-1), Toddler (2-3), Adults (18+). Poland; Łódź. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Pregnant women and their children from the Polish Mother and Child Cohort (Enrolled n=148 mother/child pairs). Polish Mother and Child Cohort. 2007; Follow-up at children age 1 and 2.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at approximately 24 months of age.	Logistic Regression.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Environment-wide association study (EWAS) conducted using logistic regression: ”Language development during the second year of life is strongly associated with 20 parameters, including the child exposure levels to phthalate metabolites... MEHP (MEHPchild).” No quantitative results provided.. Significant positive association between postnatal MEHP metabolite concentrations and language development at age 2..	Sarigiannis et. al 2021 8351761 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Language development at 2 years of age	Health Effect: Neurological/Behavioral-Cognitive development, language development, motor development-Non-cancer. Outcome measure: Bayley Scales of Infant Development-Third Edition (Bayley-III)	Pregnant people. Infant (0-1), Toddler (2-3), Adults (18+). Poland; Łódź. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Pregnant women and their children from the Polish Mother and Child Cohort (Enrolled n=148 mother/child pairs). Polish Mother and Child Cohort. 2007; Follow-up at children age 1 and 2.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at approximately 24 months of age.	Logistic Regression.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Environment-wide association study (EWAS) conducted using logistic regression: "Language development during the second year of life is strongly associated with 20 parameters, including the child exposure levels to phthalate metabolites... MiBP (MiBPchild)." No quantitative results provided.. Significant positive association between postnatal MiBP metabolite concentrations and language development at age 2..	Sarigiannis et. al 2021 8351761 Low
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MBP and Hb: -0.55 (-0.74, -0.35). Significant inverse relationship in repeated measures model, where 1 ln unit increase in MBP was associated with a decrease in maternal hemoglobin. The magnitude of association was stronger in boys..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MBzP and Hb: -0.19 (-0.33, -0.05). Significant inverse relationship in repeated measures model, where 1 ln unit increase in MBzP was associated with a decrease in maternal hemoglobin. The magnitude of association was stronger in boys, non-significant in girls..	Zhu et. al 2018 4829283 Medium
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MEHP and Hb: -0.57 (-0.77, -0.37). Significant inverse relationship in repeated measures model, where 1 ln unit increase in MEHP was associated with a decrease in maternal hemoglobin. The magnitude of association was stronger in boys..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MEHHP and Hb: -0.54 (-0.77, -0.30). Significant inverse relationship in repeated measures model, where 1 ln unit increase in MEHHP was associated with a decrease in maternal hemoglobin. The magnitude of association was stronger in boys, non-significant in girls..	Zhu et. al 2018 4829283 Medium
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MEOHP and Hb: -0.49 (-0.75, -0.23). Significant inverse relationship in repeated measures model, where 1 ln unit increase in MEOHP was associated with a decrease in maternal hemoglobin. The magnitude of association was stronger in boys, non-significant in girls..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Generalized linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MBP and anemia: 1.21 (1.15, 1.27). Significant association between MBP and anemia in repeated measures model, where 1 ln unit increase in MBP increased the risk of anemia. The magnitude of association was stronger in boys..	Zhu et. al 2018 4829283 Medium
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Generalized linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MEHP and anemia: 1.20 (1.14, 1.26). Significant association between MEHP and anemia in repeated measures model, where higher MEHP increased the odds of anemia. The magnitude of association was stronger in boys..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Generalized linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MEHHP and anemia: 1.16 (1.09, 1.22). Significant association between MEHHP and anemia in repeated measures model, where exposure to MEHHP increased the odds of anemia. The magnitude of association was stronger in boys..	Zhu et. al 2018 4829283 Medium
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Generalized linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MEOHP and anemia: 1.13 (1.05, 1.20). Significant association between MEOHP and anemia in repeated measures model, where exposure to MEOHP increased the odds of anemia. The magnitude of association was stronger in boys..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Linear Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MBP and Hb: -1.04 (-1.41, -0.66). Significant association between phthalate metabolite and decreased hemoglobin levels in the third trimester. Associations significant in the first trimester, and in both sexes..	Zhu et. al 2018 4829283 Medium
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Linear Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MBzP and Hb: -0.35 (-0.65, -0.06). Significant association between phthalate metabolite and decreased hemoglobin levels in the third trimester. Association significant in boys, and in the second trimester..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Linear Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MEHP and Hb: -0.90 (-1.27, -0.54). Significant association between phthalate metabolite and decreased hemoglobin levels in the third trimester. Association significant in both sexes, and in other trimesters overall and/or in boys..	Zhu et. al 2018 4829283 Medium
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Linear Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MEHHP and Hb: -0.69 (-1.16, -0.22). Significant association between phthalate metabolite and decreased hemoglobin levels in the third trimester. Association significant in boys, and in other trimesters overall. Significant only in boys in the 2nd trimester..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Linear Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MEOHP and Hb: -0.80 (-1.34, -0.26). Significant association between phthalate metabolite and decreased hemoglobin levels in the third trimester. Association significant in boys, and in other trimesters overall and in both sexes. Significant only overall and in boys in other trimesters..	Zhu et. al 2018 4829283 Medium
hemoglobin levels	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with female fetus' from Ma'anshan Birth Cohort (n = 1596). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Linear Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) per 1 ln MEHP and Hb: -0.90 (-1.27, -0.54). Significant association between phthalate metabolite and decreased hemoglobin levels in the third trimester overall and in both sexes. Association significant in other trimesters overall..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Logistic Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for MBP and anemia: 1.18 (1.09,1.28). Significant association between phthalate metabolite and increased risk for anemia in the third trimester overall and in both sexes. Significant in other trimesters; in the second trimester significant only in boys..	Zhu et. al 2018 4829283 Medium
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Logistic Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for MBzP and anemia: 1.09 (1.01,1.16). Significant association between phthalate metabolite and increased risk for anemia in the third trimester overall and in boys. Also significant in the first trimester, overall and in boys..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Logistic Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MEHP and anemia: 1.20 (1.10, 1.29). Significant association between phthalate metabolite and increased risk for anemia in the third trimester overall and in both sexes. Also significant in the first trimester, overall and in both sexes..	Zhu et. al 2018 4829283 Medium
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Logistic Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MEHHP and anemia: 1.27 (1.15, 1.38). Significant association between phthalate metabolite and increased risk for anemia in the third trimester overall and in both sexes. Also significant in other trimesters, in the second trimester only in boys..	Zhu et. al 2018 4829283 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women with male fetus' from Ma'anshan Birth Cohort (n = 1667). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in each trimester of pregnancy.	Logistic Regression. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MEOHP and anemia: 1.30 (1.17, 1.44). Significant association between phthalate metabolite and increased risk for anemia in the third trimester overall and in both sexes. Also significant in other trimesters, in the second trimester only in boys..	Zhu et. al 2018 4829283 Medium
anemia	Health Effect: Immune/Hematological-Hemoglobin (Hb) concentrations, anemia-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Ma'anshan. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Chinese pregnant women from Ma'anshan Birth Cohort (n = 3269). Ma'anshan Birth Cohort Study (MABC). 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured throughout pregnancy.	Generalized linear mixed model. Confounders adjusted for: maternal age, gestational age, prepregnant BMI, education, occupation, smoking, serum iron concentration, nutritional supplements (folic acid, vitamins, iron) before conception and pregnancy, creatinine..	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) MBzP and anemia: 1.08 (1.01, 1.14). Significant association between MBzP and anemia in repeated measures model, where 1 ln unit increase in MBzP increased the risk of anemia in boys. The association was not significant overall or in girls..	Zhu et. al 2018 4829283 Medium

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Activated partial thrombo-plastin time (APTT)	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer-Immune/Hematological-Maternal hematologic parameters in pregnancy: total white blood cell counts (WBC), red blood cell counts (RBC), hemoglobin (Hb), and platelet counts (PLT)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Linear Regression. Confounders adjusted for: gestational age at sample collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron and folate supplementation during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: continuous. APTT (seconds) beta (95% CI) =0.211 (0.085, 0.338); p-FDR=0.0088. Significant positive associations were reported for ln-transformed MBP with APTT, including after FDR adjustment and after excluding several pregnancy complications..	Jiang et. al 2018 4728517 Medium
hemoglobin (Hb)	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Linear Regression. Confounders adjusted for: gestational age at sample collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron supplementation during pregnancy, infant sex.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Hb (g/L) beta (95% CI) = -0.530 (-0.922, -0.138), p-FDR =0.0216. Ln-MEHP was negatively associated with Hb, including after FDR adjustment and after excluding several pregnancy complications..	Jiang et. al 2018 4728517 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
hemoglobin (Hb)	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Linear Regression. Confounders adjusted for: gestational age at sample collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron supplementation during pregnancy, infant sex.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Hb (g/L) beta (95% CI) = -0.947 (-1.611, -0.282), p-FDR =0. 0053. Ln-MEOHP was negatively associated with Hb, including after FDR adjustment and after excluding several pregnancy complications..	Jiang et. al 2018 4728517 Medium
hemoglobin (Hb)	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Linear Regression. Confounders adjusted for: gestational age at sample collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron supplementation during pregnancy, infant sex.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Hb (g/L) beta (95% CI) = -1.048 (-1.737, -0.360), p-FDR =0. 0029. Ln-MECPP was negatively associated with Hb, including after FDR adjustment and after excluding several pregnancy complications..	Jiang et. al 2018 4728517 Medium
Anemia	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Logistic Regression. Confounders adjusted for: gestational age at samples collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron and folate supplementation during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for ln-MEHP and odds of anemia = 1.25 (1.12, 1.39), p-FDR $<$ 0.0001. MEHP was positively and significantly associated with anemia in the third trimester..	Jiang et. al 2018 4728517 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Anemia	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Logistic Regression. Confounders adjusted for: gestational age at samples collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron and folate supplementation during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for ln-MEOHP and odds of anemia = 1.22 (1.03, 1.46, p-FDR=1.45. MEOHP was positively and significantly associated with anemia in the third trimester..	Jiang et. al 2018 4728517 Medium
Anemia	Health Effect: Immune/Hematological-Maternal coagulation parameters in pregnancy: Activated partial thromboplastin time (APTT), prothrombin time (PT), thrombin time (TT), fibrinogen (Fg)-Non-cancer. Outcome measure: Medical Records	Pregnant people. Adults (18+). China; Wuhan. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 1482 pregnant women in Wuhan China (Enrolled n = 1642; Used in analysis n = 1482). 2013-2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (prior to delivery).	Logistic Regression. Confounders adjusted for: gestational age at samples collection, prepregnancy BMI, parity, gestational diabetes mellitus, gestational hypertension disorder, education status, passive smoking, iron and folate supplementation during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for ln-MECPP and odds of anemia = 1.22 (1.03, 1.46), p-FDR=0.033. MECPP was positively and significantly associated with anemia in the third trimester..	Jiang et. al 2018 4728517 Medium
Metabolic syndrome (MetS)	Health Effect: Cardiovascular-Metabolic syndrome (MetS)-Non-cancer. Outcome measure: Operational definition: current BP medication use, current anti-diabetic medication use, and body mass index (BMI) >30	General public. Adults (18+), Older Adults (65+). South Korea. Female, Male. Cross-Sectional. PESS: Other Chemical and Non-chemical stressors (ex. exposure to other substances that affect same organ as test chemical). 5251 general population adults in South Korea. Korean National Environmental Health Survey II (KNEHS). 2012-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure was measured via biomonitoring concurrent with outcome assessment.	Logistic Regression. Confounders adjusted for: creatinine.	Lowest exposure concentration for a significant adverse health outcome response: quartile 2. OR (95% CI) for Q2 vs. Q1: 1.691 (1.277 - 2.238); Q3 vs. Q1: 1.870 (1.418–2.465); Q4 vs. Q1: 2.579 (1.978–3.362). Statistically significant positive associations were reported for all quartiles but only in the models that were adjusted only for creatinine and not the models that adjusted for other potential confounders. Results for the other models were positive but not statistically significant..	Shim et. al 2019 5114010 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
TT3/TT4 Ratio	Health Effect: Thyroid-Thyroid function: total triiodothyronine (TT3), total thyroxine (TT4), TT3:TT4 ratio, thyroid stimulating hormone (TSH), thyroid peroxidase autoantibodies (TPOAb)-Non-cancer. Outcome measure: Thyroid function markers measured in plasma	Patients in clinics, Pregnant people. Adults (18+). Norway. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women who had a singleton birth and lived close to Oslo (Enrolled n=33050; Used in analysis n=473). Norwegian Mother, Father, and Child Cohort (MoBa). 2004-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during a routine prenatal ultrasound visit.	Generalized linear mixed model. Confounders adjusted for: year, dietary selenium, dietary iodine, parity, depression, season of urine collection, education, age, smoking during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta coefficient (95% CI) for change in TT3/TT4 per IQR increase in MiBP: 0.15 (-0.18, 0.48). Non-significant association between MiBP and the absolute difference in TT3/TT4 levels. The authors also reported similar results from BKMR analyses..	Choi et. al 2021 7978495 Medium
TT3 (ng/dL)	Health Effect: Thyroid-Thyroid function: total triiodothyronine (TT3), total thyroxine (TT4), TT3:TT4 ratio, thyroid stimulating hormone (TSH), thyroid peroxidase autoantibodies (TPOAb)-Non-cancer. Outcome measure: Thyroid function markers measured in plasma	Patients in clinics, Pregnant people. Adults (18+). Norway. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women who had a singleton birth and lived close to Oslo (Enrolled n=33050; Used in analysis n=473). Norwegian Mother, Father, and Child Cohort (MoBa). 2004-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during a routine prenatal ultrasound visit.	Generalized linear mixed model. Confounders adjusted for: year, dietary selenium, dietary iodine, parity, depression, season of urine collection, education, age, smoking during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta coefficient (95% CI) for change in TT3 per IQR increase in MiBP: 1.63 (-2.16, 5.43). Non-significant association between MiBP and the absolute difference in TT3 levels. The authors also reported similar results from BKMR analyses..	Choi et. al 2021 7978495 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Absolute difference in TT4 (ug/dL)	Health Effect: Thyroid-Thyroid function: total triiodothyronine (TT3), total thyroxine (TT4), TT3:TT4 ratio, thyroid stimulating hormone (TSH), thyroid peroxidase autoantibodies (TPOAb)-Non-cancer. Outcome measure: Thyroid function markers measured in plasma	Patients in clinics, Pregnant people. Adults (18+). Norway. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women who had a singleton birth and lived close to Oslo (Enrolled n=33050; Used in analysis n=473). Norwegian Mother, Father, and Child Cohort (MoBa). 2004-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during a routine prenatal ultrasound visit.	Generalized linear mixed model. Confounders adjusted for: year, dietary selenium, dietary iodine, parity, depression, season of urine collection, education, age, smoking during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta coefficient (95% CI) for change in TT4 per IQR increase in MiBP: 0.02 (-0.18, 0.23). Non-significant association between MiBP and the absolute difference in TT4 levels. The authors also reported similar results from BKMR analyses..	Choi et. al 2021 7978495 Medium
Absolute difference in TSH (mU/L)	Health Effect: Thyroid-Thyroid function: total triiodothyronine (TT3), total thyroxine (TT4), TT3:TT4 ratio, thyroid stimulating hormone (TSH), thyroid peroxidase autoantibodies (TPOAb)-Non-cancer. Outcome measure: Thyroid function markers measured in blood	Patients in clinics, Pregnant people. Adults (18+). Norway. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women who had a singleton birth and lived close to Oslo (Enrolled n=33050; Used in analysis n=473). Norwegian Mother, Father, and Child Cohort (MoBa). 2004-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during a routine prenatal ultrasound visit.	Generalized linear mixed model. Confounders adjusted for: year, dietary selenium, dietary iodine, parity, depression, season of urine collection, education, age, smoking during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. TSH for MiBPGLM: 0.04 (-0.08, 0.16). Non-significant association between MiBP and the absolute difference in TSH levels. The authors also report results from BKMR (exact) and BKMR (approx) analyses..	Choi et. al 2021 7978495 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Absolute difference in TT3/TT4 Ratio	Health Effect: Thyroid-Thyroid function: total tri-iodothyronine (TT3), total thyroxine (TT4), TT3:TT4 ratio, thyroid stimulating hormone (TSH), thyroid peroxidase autoantibodies (TPOAb)-Non-cancer. Outcome measure: Thyroid function markers measured in plasma	Patients in clinics, Pregnant people. Adults (18+). Norway. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or em-bryo/fetus (developmental) (conception through birth). Women who had a singleton birth and lived close to Oslo (Enrolled n=33050; Used in analysis n=473). Norwegian Mother, Father, and Child Cohort (MoBa). 2004-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Un-clear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during a routine prenatal ultrasound visit.	Generalized linear mixed model. Confounders ad-justed for: year, dietary selenium, dietary iodine, parity, depression, deason of urine collection, educa-tion, age, smoking during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta coefficient (95% CI) for change in TT3/TT4 per IQR increase in MBzP: -0.08 (-0.40, 0.25). Non-significant association between MBzP and the absolute difference in TT3/TT4 levels. The authors also reported similar results from BKMR analyses..	Choi et. al 2021 7978495 Medium
Absolute difference in TT3 (ng/dL)	Health Effect: Thyroid-Thyroid function: total tri-iodothyronine (TT3), total thyroxine (TT4), TT3:TT4 ratio, thyroid stimulating hormone (TSH), thyroid peroxidase autoantibodies (TPOAb)-Non-cancer. Outcome measure: Thyroid function markers measured in plasma	Patients in clinics, Pregnant people. Adults (18+). Norway. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or em-bryo/fetus (developmental) (conception through birth). Women who had a singleton birth and lived close to Oslo (Enrolled n=33050; Used in analysis n=473). Norwegian Mother, Father, and Child Cohort (MoBa). 2004-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Un-clear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during a routine prenatal ultrasound visit.	Generalized linear mixed model. Confounders ad-justed for: year, dietary selenium, dietary iodine, parity, depression, season of urine collection, educa-tion, age, smoking during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta coefficient (95% CI) for change in TT3 per IQR increase in MBzP: 2.43 (-1.28, 6.14). Non-significant association between MBzP and the absolute difference in TT3 levels. The authors also reported similar results from BKMR analyses..	Choi et. al 2021 7978495 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Absolute difference in TT4 (ug/dL)	Health Effect: Thyroid-Thyroid function: total triiodothyronine (TT3), total thyroxine (TT4), TT3:TT4 ratio, thyroid stimulating hormone (TSH), thyroid peroxidase autoantibodies (TPOAb)-Non-cancer. Outcome measure: Thyroid function markers measured in plasma	Patients in clinics, Pregnant people. Adults (18+). Norway. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women who had a singleton birth and lived close to Oslo (Enrolled n=33050; Used in analysis n=473). Norwegian Mother, Father, and Child Cohort (MoBa). 2004-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during a routine prenatal ultrasound visit.	Generalized linear mixed model. Confounders adjusted for: year, dietary selenium, dietary iodine, parity, depression, season of urine collection, education, age, smoking during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta coefficient (95% CI) for change in TT4 per IQR increase in MBzP: 0.18 (-0.01, 0.38). Non-significant association between MBzP and the absolute difference in TT4 levels. The authors also reported similar results from BKMR analyses..	Choi et. al 2021 7978495 Medium
Absolute difference in TSH (mU/L)	Health Effect: Thyroid-Thyroid function: total triiodothyronine (TT3), total thyroxine (TT4), TT3:TT4 ratio, thyroid stimulating hormone (TSH), thyroid peroxidase autoantibodies (TPOAb)-Non-cancer. Outcome measure: Thyroid function markers measured in plasma	Patients in clinics, Pregnant people. Adults (18+). Norway. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women who had a singleton birth and lived close to Oslo (Enrolled n=33050; Used in analysis n=473). Norwegian Mother, Father, and Child Cohort (MoBa). 2004-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during a routine prenatal ultrasound visit.	Generalized linear mixed model. Confounders adjusted for: year, dietary selenium, dietary iodine, parity, depression, deason of urine collection, education, age, smoking during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta coefficient (95% CI) for change in TSH per IQR increase in MBzP: -0.02 (-0.14, 0.10). Non-significant association between MBzP and the absolute difference in TSH levels. The authors also reported similar results from BKMR analyses..	Choi et. al 2021 7978495 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Absolute difference in TT3/TT4 Ratio	Health Effect: Thyroid-Thyroid function: total tri-iodothyronine (TT3), total thyroxine (TT4), TT3:TT4 ratio, thyroid stimulating hormone (TSH), thyroid peroxidase autoantibodies (TPOAb)-Non-cancer. Outcome measure: Thyroid function markers measured in plasma	Patients in clinics, Pregnant people. Adults (18+). Norway. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women who had a singleton birth and lived close to Oslo (Enrolled n=33050; Used in analysis n=473). Norwegian Mother, Father, and Child Cohort (MoBa). 2004-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during a routine prenatal ultrasound visit.	Generalized linear mixed model. Confounders adjusted for: year, dietary selenium, dietary iodine, parity, depression, season of urine collection, education, age, smoking during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta coefficient (95% CI) for change in TT3/TT4 per IQR increase in MnBP: 0.15 (-0.14, 0.44). Non-significant association between MnBP and the absolute difference in TT3/TT4 levels. The authors also reported similar results from BKMR analyses..	Choi et. al 2021 7978495 Medium
Absolute difference in TT3 (ng/dL)	Health Effect: Thyroid-Thyroid function: total tri-iodothyronine (TT3), total thyroxine (TT4), TT3:TT4 ratio, thyroid stimulating hormone (TSH), thyroid peroxidase autoantibodies (TPOAb)-Non-cancer. Outcome measure: Thyroid function markers measured in plasma	Patients in clinics, Pregnant people. Adults (18+). Norway. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women who had a singleton birth and lived close to Oslo (Enrolled n=33050; Used in analysis n=473). Norwegian Mother, Father, and Child Cohort (MoBa). 2004-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during a routine prenatal ultrasound visit.	Generalized linear mixed model. Confounders adjusted for: year, dietary selenium, dietary iodine, parity, depression, season of urine collection, education, age, smoking during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta coefficient (95% CI) for change in TT3 per IQR increase in MnBP: 0.96 (-2.38, 4.29). Non-significant association between MnBP and the absolute difference in TT3 levels. The authors also reported similar results from BKMR analyses..	Choi et. al 2021 7978495 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Absolute difference in TT4 (ug/dL)	Health Effect: Thyroid-Thyroid function: total triiodothyronine (TT3), total thyroxine (TT4), TT3:TT4 ratio, thyroid stimulating hormone (TSH), thyroid peroxidase autoantibodies (TPOAb)-Non-cancer. Outcome measure: Thyroid function markers measured in plasma	Patients in clinics, Pregnant people. Adults (18+). Norway. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women who had a singleton birth and lived close to Oslo (Enrolled n=33050; Used in analysis n=473). Norwegian Mother, Father, and Child Cohort (MoBa). 2004-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during a routine prenatal ultrasound visit.	Generalized linear mixed model. Confounders adjusted for: year, dietary selenium, dietary iodine, parity, depression, season of urine collection, education, age, smoking during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta coefficient (95% CI) for change in TT4 per IQR increase in MnBP: -0.03 (-0.21, 0.15). Non-significant association between MnBP and the absolute difference in TT4 levels. The authors also reported similar results from BKMR analyses..	Choi et. al 2021 7978495 Medium
Absolute difference in TSH (mU/L)	Health Effect: Thyroid-Thyroid function: total triiodothyronine (TT3), total thyroxine (TT4), TT3:TT4 ratio, thyroid stimulating hormone (TSH), thyroid peroxidase autoantibodies (TPOAb)-Non-cancer. Outcome measure: Thyroid function markers measured in plasma	Patients in clinics, Pregnant people. Adults (18+). Norway. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women who had a singleton birth and lived close to Oslo (Enrolled n=33050; Used in analysis n=473). Norwegian Mother, Father, and Child Cohort (MoBa). 2004-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during a routine prenatal ultrasound visit.	Generalized linear mixed model. Confounders adjusted for: year, dietary selenium, dietary iodine, parity, depression, season of urine collection, education, age, smoking during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta coefficient (95% CI) for change in TSH per IQR increase in MnBP: -0.02 (-0.12, 0.09). Non-significant association between MnBP and the absolute difference in TSH levels. The authors also reported similar results from BKMR analyses..	Choi et. al 2021 7978495 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Absolute difference in TT3/TT4 Ratio	Health Effect: Thyroid-Thyroid function: total triiodothyronine (TT3), total thyroxine (TT4), TT3:TT4 ratio, thyroid stimulating hormone (TSH), thyroid peroxidase autoantibodies (TPOAb)-Non-cancer. Outcome measure: Thyroid function markers measured in plasma	Patients in clinics, Pregnant people. Adults (18+). Norway. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women who had a singleton birth and lived close to Oslo (Enrolled n=33050; Used in analysis n=473). Norwegian Mother, Father, and Child Cohort (MoBa). 2004-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during a routine prenatal ultrasound visit.	Generalized linear mixed model. Confounders adjusted for: year, dietary selenium, dietary iodine, parity, depression, season of urine collection, education, age, smoking during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. TT3/TT4 for sum of DEHP metabolitesGLM: 0.04 (-0.17, 0.26). Non-significant association between the sum of DEHP metabolites and the absolute difference in TT3/TT4 levels. The authors also reported similar results from BKMR analyses..	Choi et. al 2021 7978495 Medium
Absolute difference in TT3 (ng/dL)	Health Effect: Thyroid-Thyroid function: total triiodothyronine (TT3), total thyroxine (TT4), TT3:TT4 ratio, thyroid stimulating hormone (TSH), thyroid peroxidase autoantibodies (TPOAb)-Non-cancer. Outcome measure: Thyroid function markers measured in plasma	Patients in clinics, Pregnant people. Adults (18+). Norway. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women who had a singleton birth and lived close to Oslo (Enrolled n=33050; Used in analysis n=473). Norwegian Mother, Father, and Child Cohort (MoBa). 2004-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during a routine prenatal ultrasound visit.	Generalized linear mixed model. Confounders adjusted for: year, dietary selenium, dietary iodine, parity, depression, season of urine collection, education, age, smoking during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. TT3 for sum of DEHP metabolitesGLM: -0.47 (-2.94, 2.01). Non-significant association between sum of DEHP metabolites and the absolute difference in TT3 levels. The authors also reported similar results from BKMR analyses..	Choi et. al 2021 7978495 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Absolute difference in TT4 (ug/dL)	Health Effect: Thyroid-Thyroid function: total triiodothyronine (TT3), total thyroxine (TT4), TT3:TT4 ratio, thyroid stimulating hormone (TSH), thyroid peroxidase autoantibodies (TPOAb)-Non-cancer. Outcome measure: Thyroid function markers measured in plasma	Patients in clinics, Pregnant people. Adults (18+). Norway. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women who had a singleton birth and lived close to Oslo (Enrolled n=33050; Used in analysis n=473). Norwegian Mother, Father, and Child Cohort (MoBa). 2004-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during a routine prenatal ultrasound visit.	Generalized linear mixed model. Confounders adjusted for: year, dietary selenium, dietary iodine, parity, depression, season of urine collection, education, age, smoking during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta coefficient (95% CI) for change in TT4 per IQR increase in the sum of DEHP metabolites: -0.07 (-0.20, 0.06). Non-significant association between the sum of DEHP metabolites and the absolute difference in TT4 levels. The authors also reported similar results from BKMR analyses..	Choi et. al 2021 7978495 Medium
Absolute difference in TSH (mU/L)	Health Effect: Thyroid-Thyroid function: total triiodothyronine (TT3), total thyroxine (TT4), TT3:TT4 ratio, thyroid stimulating hormone (TSH), thyroid peroxidase autoantibodies (TPOAb)-Non-cancer. Outcome measure: Thyroid function markers measured in plasma	Patients in clinics, Pregnant people. Adults (18+). Norway. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women who had a singleton birth and lived close to Oslo (Enrolled n=33050; Used in analysis n=473). Norwegian Mother, Father, and Child Cohort (MoBa). 2004-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during a routine prenatal ultrasound visit.	Generalized linear mixed model. Confounders adjusted for: year, dietary selenium, dietary iodine, parity, depression, season of urine collection, education, age, smoking during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta coefficient (95% CI) for change in TSH per IQR increase in the sum of DEHP metabolites: 0.02 (-0.06, 0.10). Non-significant association between the sum of DEHP metabolites and the absolute difference in TSH levels. The authors also reported similar results from BKMR analyses..	Choi et. al 2021 7978495 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Clinically diagnosed ADHD	Health Effect: Neurological/Behavioral-Attention-deficit hyperactivity disorder (ADHD)-Non-cancer. Outcome measure: Medical records (patient registry)	General public, Pregnant people. Preschool (3-5), Middle childhood (6-11). Norway. Female, Male. Nested Case-Control. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). MoBA participants born in 2003-2008 meeting eligibility criteria (n=24,035) including completed 36-month questionnaires, maternal urine and blood samples, singleton births, and geographic location (born at major hospital, direct flight to Oslo). 297 ADHD cases were randomly selected from the Norwegian Patient Registry based on ICD-10 codes; 554 controls were randomly selected from the eligible population.. Norwegian Mother and Child Cohort (MoBa). Recruitment: 2003-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (~17 weeks gestation).	Logistic Regression. Confounders adjusted for: Final models were adjusted for child sex, mother's age at delivery, mother's education level, mother's marital status, mother's prenatal smoking in the first or second trimester of pregnancy, parity, maternal depression during pregnancy, and year of birth..	Lowest exposure concentration for a significant adverse health outcome response: Continuous. OR (95% CI) for odds of ADHD per log-unit increase in sum DEHP: OR=1.47 (1.09,1.94) overall, 1.41(1.00,1.95) in boys and 1.62 (0.95,2.58) in girls.. The sum of DEHP metabolites was associated with a significant increase in odds of ADHD overall, and in both boys and girls..	Engel et. al 2018 4728558 Medium

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
androstenedione (ASD) levels	Health Effect: Reproductive/Developmental-androstenedione (ASD) and testosterone levels-Non-cancer. Outcome measure: urinary analysis	General public. Adults (18+). China; Xiamen. Male. Cross-Sectional. PESS: Studies focusing on reproductive parameters. 84 healthy reproductive age men. Not Reported.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure was measured concurrently with the outcome assessment.	Linear Regression. Confounders adjusted for: age, BMI, smoking, alcohol intake, and plastic usage.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Continuous: Beta (95% CI) for sum DEHP: 0.55 (0.31, 0.79); Tertiles: There were elevated levels of ASD in 2nd and 3rd tertiles compared to first tertile of sum (DEHP) (p-trend<0.001).. There was a statistically significant positive association between DEHP levels and androstenedione (ASD) levels..	Tian et. al 2018 4728602 Medium
testosterone levels	Health Effect: Reproductive/Developmental-androstenedione (ASD) and testosterone levels-Non-cancer. Outcome measure: urinary analysis	General public. Adults (18+). China; Xiamen. Male. Cross-Sectional. PESS: Studies focusing on reproductive parameters. 84 healthy reproductive age men. Not Reported.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure was measured via biomonitoring concurrently with the outcome assessment.	Linear Regression. Confounders adjusted for: age, BMI, smoking, alcohol intake and plastic usage.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Continuous: Beta (95% CI) for sum DEHP: 0.46 (0.18, 0.74); Tertiles: There were statistically significantly elevated levels of testosterone in 2nd and 3rd tertiles compared to first tertile of sum (DEHP) (p-trend<0.001).. There was a statistically significant positive association between DEHP levels and testosterone levels..	Tian et. al 2018 4728602 Medium
androstenedione (ASD) levels	Health Effect: Reproductive/Developmental-androstenedione (ASD) and testosterone levels-Non-cancer. Outcome measure: urinary analysis	General public. Adults (18+). China; Xiamen. Male. Cross-Sectional. PESS: Studies focusing on reproductive parameters. 84 healthy reproductive age men. Not Reported.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure was measured via biomonitoring concurrently with the outcome assessment.	Linear Regression. Confounders adjusted for: age, BMI, smoking, alcohol intake and plastic usage.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Continuous: Beta (95% CI) for MBP: 0.35 (0.11, 0.60); Tertiles: There were statistically significant elevated levels of ASD in the third tertile only compared to the first tertile of MBP (p-trend = 0.001).. There was a statistically significant positive association between MBP levels and androstenedione levels. No statistically singificant association was found between MBP and testosterone levels..	Tian et. al 2018 4728602 Medium

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Preterm Birth	Health Effect: Reproductive/Developmental- Gestational age at delivery- Non-cancer. Outcome measure: Medical Records	Pregnant people. Infant (0-1), Adults (18+). United States; Boston, MA. Female, Male. Nested Case-Control. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women with prenatal visits at clinics in the Boston area (n=130 preterm infants, n=352 term infants). Recruitment: 2006 - 2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured in repeated samples collected during pregnancy.	Logistic Regression. Confounders adjusted for: specific gravity, maternal age, race, education.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) per IQR increase in mean MEHP: 1.50 (1.10 - 2.07). Significant increase in odds of preterm birth were associated with increases in mean MEHP using the mean of multiple concentrations or repeated measures. However, associations between MEHP and shorter gestational age at delivery were not significant using Cox or Accelerated Failure Time models..	Boss et. al 2018 4728664 Medium
Preterm Birth	Health Effect: Reproductive/Developmental- Gestational age at delivery- Non-cancer. Outcome measure: Medical Records	Pregnant people. Infant (0-1), Adults (18+). United States; Boston, MA. Female, Male. Nested Case-Control. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women with prenatal visits at clinics in the Boston area (n=130 preterm infants, n=352 term infants). Recruitment: 2006 - 2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured in repeated samples collected during pregnancy.	Logistic Regression. Confounders adjusted for: specific gravity, maternal age, race, education.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) preterm birth per IQR increase in mean MECPP: 1.66 (1.20, 2.30). Significant increase in odds of preterm birth were associated with either the mean of multiple MECPP measures, or repeated MECPP measures. Similarly, MECPP was associated with significantly shorter gestational age at delivery using Cox or Accelerated Failure Time models..	Boss et. al 2018 4728664 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Gestational Age at Delivery	Health Effect: Reproductive/Developmental- Gestational age at delivery- Non-cancer. Outcome measure: Medical Records	Pregnant people. Infant (0-1), Adults (18+). United States; Boston, MA. Female, Male. Nested Case-Control. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women with prenatal visits at clinics in the Boston area (n=130 preterm infants, n=352 term infants). Recruitment: 2006 - 2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured in repeated samples collected during pregnancy.	Cox Proportional Hazards Model. Confounders adjusted for: specific gravity, maternal age, race, education.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) per IQR increase in mean MECPP: 1.21 (1.09, 1.33). Significant increases in shorter time to delivery were associated with MECPP using Cox regression. Similar associations were observed using Accelerated Failure Time models or using Logistic regression models to analyze odds of preterm birth..	Boss et. al 2018 4728664 Medium
Gestational Age at Delivery	Health Effect: Reproductive/Developmental- Gestational age at delivery- Non-cancer. Outcome measure: Medical Records	Pregnant people. Infant (0-1), Adults (18+). United States; Boston, MA. Female, Male. Nested Case-Control. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women with prenatal visits at clinics in the Boston area (n=130 preterm infants, n=352 term infants). Recruitment: 2006 - 2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured in repeated samples collected during pregnancy.	Cox Proportional Hazards Model. Confounders adjusted for: specific gravity, maternal age, race, education, private vs. public health insurance.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) per IQR increase in mean MBzP: 1.15 (1.03, 1.27). Significant increases in shorter time to delivery were associated with MBzP using Cox regression. Similar associations were observed using Logistic regression models to analyze odds of preterm birth. Accelerated Failure Time model results were not significant..	Boss et. al 2018 4728664 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Gestational Age at Delivery	Health Effect: Reproductive/Developmental- Gestational age at delivery- Non-cancer. Outcome measure: Medical Records	Pregnant people. Infant (0-1), Adults (18+). United States; Boston, MA. Female, Male. Nested Case-Control. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women with prenatal visits at clinics in the Boston area (n=130 preterm infants, n=352 term infants). Recruitment: 2006 - 2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured in repeated samples collected during pregnancy.	Cox Proportional Hazards Model. Confounders adjusted for: specific gravity, maternal age, race, education, private vs. public health insurance.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) per IQR increase in mean MBP: 1.17 (1.05, 1.29). Significant increases in shorter time to delivery were associated with MBP using Cox regression. Associations were not significant using Accelerated Failure Time models, or Logistic regression to model preterm birth..	Boss et. al 2018 4728664 Medium
Preterm Birth	Health Effect: Reproductive/Developmental- Gestational age at delivery- Non-cancer. Outcome measure: Medical Records	Pregnant people. Infant (0-1), Adults (18+). United States; Boston, MA. Female, Male. Nested Case-Control. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women with prenatal visits at clinics in the Boston area (n=130 preterm infants, n=352 term infants). Recruitment: 2006 - 2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured in repeated samples collected during pregnancy.	Logistic Regression. Confounders adjusted for: specific gravity, maternal age, race, education.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) per IQR increase in mean ∑DEHP: 1.47 (1.06, 2.03). Significant increases in odds of preterm birth were associated with the mean or repeated measures of ∑DEHP using Logistic regression. Associations were significant using Cox and Accelerated Failure Time models using mean but not repeated measures of ∑DEHP..	Boss et. al 2018 4728664 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Gestational Age at Delivery	Health Effect: Reproductive/Developmental-Gestational age at delivery-Non-cancer. Outcome measure: Medical Records	Pregnant people. Infant (0-1), Adults (18+). United States; Boston, MA. Female, Male. Nested Case-Control. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women with prenatal visits at clinics in the Boston area (n=130 preterm infants, n=352 term infants). Recruitment: 2006 - 2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured in repeated samples collected during pregnancy.	Cox Proportional Hazards Model. Confounders adjusted for: specific gravity, maternal age, race, education.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) per IQR increase in ∑DEHP: 1.14 (1.04, 1.26). Significant increases in the likelihood of shorter gestational age at birth were associated with the mean ∑DEHP using Cox or Accelerated Failure Time models; models using repeated measures were not significant. Logistic regression for odds of preterm birth were significant using both mean and repeated ∑DEHP..	Boss et. al 2018 4728664 Medium

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
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Preterm Birth	Health Effect: Reproductive/Developmental- Gestational age at delivery- Non-cancer. Outcome measure: Medical Records	Pregnant people. Infant (0-1), Adults (18+). United States; Boston, MA. Female, Male. Nested Case-Control. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women with prenatal visits at clinics in the Boston area (n=130 preterm infants, n=352 term infants). Recruitment: 2006 - 2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured in repeated samples collected during pregnancy.	Logistic Regression. Confounders adjusted for: specific gravity, maternal age, race, education.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) preterm birth per IQR increase in mean MECPP: 1.66 (1.20, 2.30). Significant increase in odds of preterm birth were associated with either the mean of multiple MECPP measures, or repeated MECPP measures. Similarly, MECPP was associated with significantly shorter gestational age at delivery using Cox or Accelerated Failure Time models..	Boss et. al 2018 4728664 Medium

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Human Health Hazard Epidemiology Extraction Table:

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Preterm Birth	Health Effect: Reproductive/Developmental- Gestational age at delivery- Non-cancer. Outcome measure: Medical Records	Pregnant people. Infant (0-1), Adults (18+). United States; Boston, MA. Female, Male. Nested Case-Control. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women with prenatal visits at clinics in the Boston area (n=130 preterm infants, n=352 term infants). Recruitment: 2006 - 2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured in repeated samples collected during pregnancy.	Logistic Regression. Confounders adjusted for: specific gravity, maternal age, race, education.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) per IQR increase in mean ∑DEHP: 1.47 (1.06, 2.03). Significant increases in odds of preterm birth were associated with the mean or repeated measures of ∑DEHP using Logistic regression. Associations were significant using Cox and Accelerated Failure Time models using mean but not repeated measures of ∑DEHP..	Boss et. al 2018 4728664 Medium

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Language delay	Health Effect: Neurological/Behavioral-Language delay-Non-cancer. Outcome measure: Questionnaire	General public. Toddler (2-3). SELMA: Sweden; TIDES: US; SELMA: county of Värmland; TIDES: University of Minnesota Medical Center [Minneapolis], University of California-San Francisco Clinical Center [San Francisco], University of Rochester Medical Center [Rochester, NewYork], and Seattle Children's Hospital, University of Washington [Seattle]). Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). SELMA: Swedish women and their offspring (Women enrolled n=2582; children used in analysis n=963); TIDES: US women and their offspring (Women enrolled n=969; children used in analysis n=370). Swedish Environmental Longitudinal Mother and Child, Asthma and Allergy (SELMA) study; The Infant Development and the Environment Study (TIDES). Recruitment: 2007-2010 (SELMA, 2010-2012 (TIDES); Data collection: 2007-2013 (SELMA), 2010-2016 (TIDES); Analysis: 2016-2018 (SELMA), 2016-2018 (TIDES).	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via biomonitoring during <13 weeks of pregnancy.	Logistic Regression. Confounders adjusted for: SELMA: creatinine level in urine, sex, preterm birth, mother's educational level, mother's smoking status, mother's weight at study enrollment; TIDES: urinary-specific gravity, sex, preterm birth, mother's educational level, mother's race/ethnicity, mother's smoking status, mother's weight at study enrollment.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted OR (95% CI) for SELMA: 1.29 (1.03-1.63). Significant positive associations between MBP exposure and language delay in SELMA children. Association was positive in TIDES children but not significant.In SELMA, boys were non-significantly more likely to experience language delay than girls..	Bornehag et. al 2018 5043345 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Language delay	Health Effect: Neurological/Behavioral-Language delay-Non-cancer. Outcome measure: Questionnaire	General public. Toddler (2-3). SELMA: Sweden; TIDES: US; SELMA: county of Värmland; TIDES: University of Minnesota Medical Center [Minneapolis], University of California-San Francisco Clinical Center [San Francisco], University of Rochester Medical Center [Rochester, NewYork], and Seattle Children's Hospital, University of Washington [Seattle]). Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). SELMA: Swedish women and their offspring (Women enrolled n=2582; children used in analysis n=963); TIDES: US women and their offspring (Women enrolled n=969; children used in analysis n=370). Swedish Environmental Longitudinal Mother and Child, Asthma and Allergy (SELMA) study; The Infant Development and the Environment Study (TIDES). Recruitment: 2007-2010 (SELMA, 2010-2012 (TIDES); Data collection: 2007-2013 (SELMA), 2010-2016 (TIDES); Analysis: 2016-2018 (SELMA), 2016-2018 (TIDES).	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via biomonitoring during <13 weeks of pregnancy.	Logistic Regression. Confounders adjusted for: SELMA: creatinine level in urine, sex, preterm birth, mother's educational level, mother's smoking status, mother's weight at study enrollment; TIDES: urinary-specific gravity, sex, preterm birth, mother's educational level, mother's race/ethnicity, mother's smoking status, mother's weight at study enrollment.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Adjusted OR (95% CI) for SELMA: 1.26 (1.07-1.49)Sex-specific resultsSELMA | Boys: 1.39 (1.13-1.71); Girls: 1.04 (0.76-1.41). Significant positive associations between MBzP exposure and language delay in SELMA children. In SELMA, boys were significantly more likely to experience language delay than girls..	Bornehag et. al 2018 5043345 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Renal function parameters (albumin-to-creatinine ratio (ACR), beta2-microglobulin (B2M), N-acetyl-beta-d-glucosaminidase (NAG))	Health Effect: Renal/Kidney-Renal function parameters (albumin-to-creatinine ratio (ACR), beta2-microglobulin (B2M), N-acetyl-beta-d-glucosaminidase (NAG))-Non-cancer. Outcome measure: Single spot urine samples	General public. Adults (18+), Older Adults (65+). China; Shanghai. Female, Male. Cross-Sectional. PESS: . Adult participants in the Shanghai Food Consumption Survey with complete information on demographic characteristics and health status and sufficient urine samples (n=1663). Shanghai Food Consumption Survey (SHFCS). 2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in single spot urine sample during 2012 cycle of the Shanghai Food Consumption Survey.	Linear Regression. Confounders adjusted for: age, sex, ethnicity, education, occupation, physical activity, marital status, smoking status, drinking, BMI, diabetes, systolic blood pressure, diastolic blood pressure, nutrients.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) for albumin to creatinine ratio (ACR):MEHP: 0.095 (0.072, 0.118)MEOHP: 0.022 (0.002, 0.043)MECPP: 0.112 (0.076, 0.148)MEHHP: 0.046 (0.029, 0.063)MCMHP: 0.043 (0.016, 0.070)Regression coefficient (95% CI) for beta2-microglobulin (B2M): MEHP: 0.140 (0.107, 0.173)MEOHP: 0.063 (0.033, 0.092)MECPP: 0.114 (0.061, 0.167)MEHHP: 0.051 (0.026, 0.076)MCMHP: 0.049 (0.010, 0.088)Regression coefficient (95% CI) for N-acetyl beta-d-glucosaminidase (NAG):MEHP: 0.059 (0.041, 0.077)MEOHP: 0.048 (0.032, 0.064)MECPP: 0.114 (0.086, 0.142)MEHHP: 0.028 (0.014, 0.041)MCMHP: 0.046 (0.025, 0.067). Significant positive associations between all DEHP metabolites and all three renal function outcomes. Results were similar in analyses where outcomes were dichotomized, as well as in dichotomized analyses where the outcome was potentially impaired renal function (PIRF, defined as at least one parameter above the 90th percentile)..	Chen et. al 2019 5041222 Medium
Renal function parameters (albumin-to-creatinine ratio (ACR), beta2-microglobulin (B2M), N-acetyl-beta-d-glucosaminidase (NAG))	Health Effect: Renal/Kidney-Renal function parameters (albumin-to-creatinine ratio (ACR), beta2-microglobulin (B2M), N-acetyl-beta-d-glucosaminidase (NAG))-Non-cancer. Outcome measure: Single spot urine samples	General public. Adults (18+), Older Adults (65+). China; Shanghai. Female, Male. Cross-Sectional. PESS: . Adult participants in the Shanghai Food Consumption Survey with complete information on demographic characteristics and health status and sufficient urine samples (n=1663). Shanghai Food Consumption Survey (SHFCS). 2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in single spot urine sample during 2012 cycle of the Shanghai Food Consumption Survey.	Linear Regression. Confounders adjusted for: age, sex, ethnicity, education, occupation, physical activity, marital status, smoking status, drinking, BMI, diabetes, systolic blood pressure, diastolic blood pressure, nutrients.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) for albumin to creatinine ratio (ACR):MBzP: 0.060 (0.040, 0.081)Regression coefficient (95% CI) for beta2-microglobulin (B2M): MBzP: 0.099 (0.069, 0.128)Regression coefficient (95% CI) for N-acetyl beta-d-glucosaminidase (NAG):MBzP: 0.080 (0.064, 0.095). Significant positive associations between MBzP and all renal function outcomes. Results were similar in analyses where outcomes were dichotomized, as well as in dichotomized analyses where the outcome was potentially impaired renal function (PIRF, defined as at least one parameter above the 90th percentile)..	Chen et. al 2019 5041222 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Renal function parameters (albumin-to-creatinine ratio (ACR), beta2-microglobulin (B2M), N-acetyl-beta-d-glucosaminidase (NAG))	Health Effect: Renal/Kidney-Renal function parameters (albumin-to-creatinine ratio (ACR), beta2-microglobulin (B2M), N-acetyl-beta-d-glucosaminidase (NAG))-Non-cancer. Outcome measure: Single spot urine samples	General public. Adults (18+), Older Adults (65+). China; Shanghai. Female, Male. Cross-Sectional. PESS: . Adult participants in the Shanghai Food Consumption Survey with complete information on demographic characteristics and health status and sufficient urine samples (n=1663). Shanghai Food Consumption Survey (SHFCS). 2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in single spot urine sample during 2012 cycle of the Shanghai Food Consumption Survey.	Linear Regression. Confounders adjusted for: age, sex, ethnicity, education, occupation, physical activity, marital status, smoking status, drinking, BMI, diabetes, systolic blood pressure, diastolic blood pressure, nutrients.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) for albumin to creatinine ratio (ACR):MnBP: -0.015 (-0.025, -0.006)Regression coefficient (95% CI) for beta2-microglobulin (B2M): MnBP: -0.040 (-0.054, -0.027)Regression coefficient (95% CI) for N-acetyl beta-d-glucosaminidase (NAG):MnBP: -0.016 (-0.023, -0.009). Significant inverse associations between MnBP and all three renal function outcomes. Results were similar in analyses where outcomes were dichotomized, as well as in dichotomized analyses where the outcome was potentially impaired renal function (PIRF, defined as at least one parameter above the 90th percentile)..	Chen et. al 2019 5041222 Medium
Renal function parameters (albumin-to-creatinine ratio (ACR), beta2-microglobulin (B2M), N-acetyl-beta-d-glucosaminidase (NAG))	Health Effect: Renal/Kidney-Renal function parameters (albumin-to-creatinine ratio (ACR), beta2-microglobulin (B2M), N-acetyl-beta-d-glucosaminidase (NAG))-Non-cancer. Outcome measure: Single spot urine samples	General public. Adults (18+), Older Adults (65+). China; Shanghai. Female, Male. Cross-Sectional. PESS: . Adult participants in the Shanghai Food Consumption Survey with complete information on demographic characteristics and health status and sufficient urine samples (n=1663). Shanghai Food Consumption Survey (SHFCS). 2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured in single spot urine sample during 2012 cycle of the Shanghai Food Consumption Survey.	Linear Regression. Confounders adjusted for: age, sex, ethnicity, education, occupation, physical activity, marital status, smoking status, drinking, BMI, diabetes, systolic blood pressure, diastolic blood pressure, nutrients.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) for albumin to creatinine ratio (ACR):MiBP: -0.013 (-0.024, -0.001)Regression coefficient (95% CI) for beta2-microglobulin (B2M): MiBP: -0.047 (-0.064, -0.030)Regression coefficient (95% CI) for N-acetyl beta-d-glucosaminidase (NAG):MiBP: -0.016 (-0.025, -0.007). Significant inverse associations between MiBP and all three renal function outcomes. Results were similar in analyses where outcomes were dichotomized, as well as in dichotomized analyses where the outcome was potentially impaired renal function (PIRF, defined as at least one parameter above the 90th percentile)..	Chen et. al 2019 5041222 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Executive Function, Behavior and Cognition	Health Effect: Neurological/Behavioral-Executive function symptoms-Non-cancer. Outcome measure: Parent and teacher ratings and a one-day clinical exam (standardized assessment tools used included BRIEF-P, Stanford-Binet IV short version, NEPSY, CDT)	General public, Pregnant people. Preschool (3-5). Norway. Female, Male. Cohort (Prospective). PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Children aged 3-5 years in a sub-study of a prospective birth cohort, selected to include a group with high and another with low ratings for ADHD-like symptoms on standardized quesestionnaires. MoBa (Norwegian Mother, Father, and Child Cohort) birth cohort. Children born after April 1, 2004; Follow-up at age 3-4 years.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Linear Regression. Confounders adjusted for: maternal ADHD, BMI, age at delivery, parity, childbirth year, and child sex, specific gravity, and analytic batch effect.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta (95% CI) for change in scores per IQR increase in MBzP. 1. Behavior Rating Inventory of Executive Function-Preschool (BRIEF-P): -Emotional control, teacher rating: 1.23 (0.31, 2.15). -Working memory, teacher rating: 1.13 (0.14, 2.13). -Emotional control, parent rating: 1.67 (0.89, 2.45); boys = 2.51 (1.47, 3.55), girls = 0.67 (- 0.46, 1.81) sex int. p=0.02. -Inhibition, parent rating: 1.00 (0.03, 1.98); boys = 1.50 (0.20,2.81), girls = 0.41 (-1.02, 1.83), sex int. p=0.26. -Working memory, parent rating: overall ns; boys = 1.52 (0.14,2.90), girls = 0.88 (-0.62, 2.39), sex int. p=0.53. 2. Clinic assessments (Stanford-Binet [SB5}, Cookie Delay Task [CDT] or NEPSY statue task: -Non-verbal working memory, SB5: 0.19 (0.09, 0.28); boys = 0.14 (0.01, 0.27), girls = 0.24 (0.09, 0.38), sex int. p=0.32. -Verbal working memory, SB5: 0.13 (0.01, 0.25); boys =0.17 (0.03, 0.31), girls = 0.03 (-0.18, 0.25), sex int. p=0.28. -Inhibition, NEPSY: 0.18 (0.08, 0.28); boys = 0.09 (-0.04,0.23), girls = 0.27 (0.13, 0.42), sex int. p=0.07.. Prenatal MBzP was significantly associated with higher parent and teacher ratings of preschool executive function and cognition, including poorer emotional control, working memory, and inhibition. Associations were stronger among boys for parent-reported emotional control. Higher MBzP was also associated with poorer ratings for clinical assessments of executive function and cognition, including working memory (verbal and non-verbal) and inhibition..	Choi et. al 2021 8010273 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Executive Function, Behavior and Cognition	Health Effect: Neurological/Behavioral-Executive function symptoms-Non-cancer. Outcome measure: Parent and teacher ratings and a one-day clinical exam (standardized assessment tools used included BRIEF-P, Stanford-Binet IV short version, NEPSY, CDT)	General public, Pregnant people. Preschool (3-5). Norway. Female, Male. Cohort (Prospective). PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Children aged 3-5 years in a sub-study of a prospective birth cohort, selected to include a group with high and another with low ratings for ADHD-like symptoms on standardized quesestionnaires. MoBa (Norwegian Mother, Father, and Child Cohort) birth cohort. Children born after April 1, 2004; Follow-up at age 3-4 years.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Linear Regression. Confounders adjusted for: maternal ADHD, BMI, age at delivery, parity, childbirth year, and child sex, specific gravity, and analytic batch effect.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta (95% CI) for change in scores per IQR increase in MnBP. Behavior Rating Inventory of Executive Function-Preschool (BRIEF-P): -Emotional control, parent rating: 1.56 (0.88, 2.23); boys = 2.04 (1.23, 2.84), girls = 0.48 (- 0.72, 1.67), sex int. p=0.03. -Inhibition, parent rating: 1.70 (0.88, 2.53); boys = 2.74 (1.77,3.72), girls = 0.63 (-2.08, 0.83). sex int. p=<0.01. -Working memory, parent rating: 1.49 (0.60, 2.37); boys =2.91 (1.89, 3.94), girls = -1.72 (-3.25, - 0.19) sex int. p=<0.01. Clinic assessments (Stanford-Binet [SB5}, Cookie Delay Task [CDT] or NEPSY statue task: -Self-control, CDT: 0.20 (0.12, 0.28); boys = 0.29 (0.19, 0.39) girls = -0.003 (-0.15, 0.15), sex int. p=<0.01. -Inhibition, NEPSY: 0.13 (0.05, 0.22); boys = 0.14 (0.04, 0.24), girls = 0.11 (- 0.06, 0.27), sex int. p=0.71. -Verbal working memory, SB5: overall ns; boys = 0.16 (0.06,0.27), girls =0.16 (-0.31, - 0.01), sex int. p=<0.01.. Prenatal MBnP was associated with significantly higher parent ratings of preschool executive function and cognition, including poorer emotional control, working memory, and inhibition. Associations were significantly stronger among boys for emotional control, inhibition and working memory. Higher MBnP was also associated with poorer ratings for clinical assessments of executive function and cognition, including self-control and inhibition; associations with self-control were limited to boys. MBnP was also associated with clinically assessed working memory problems in boys..	Choi et. al 2021 8010273 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Executive Function, Behavior and Cognition	Health Effect: Neurological/Behavioral-Executive function symptoms-Non-cancer. Outcome measure: Parent and teacher ratings and a one-day clinical exam (standardized assessment tools used included BRIEF-P, Stanford-Binet IV short version, NEPSY, CDT)	General public, Pregnant people. Preschool (3-5). Norway. Female, Male. Cohort (Prospective). PESS: Lifestage , Pre-existing Disease (ex. altered metabolism, behaviors, treatments related to condition). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Children aged 3-5 years in a sub-study of a prospective birth cohort, selected to include a group with high and another with low ratings for ADHD-like symptoms on standardized quesestionnaires. MoBa (Norwegian Mother, Father, and Child Cohort) birth cohort. Children born after April 1, 2004; Follow-up at age 3-4 years.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Linear Regression. Confounders adjusted for: maternal ADHD, BMI, age at delivery, parity, childbirth year, and child sex, specific gravity, and analytic batch effect.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta (95% CI) for change in scores per IQR increase in MiBP. Behavior Rating Inventory of Executive Function-Preschool (BRIEF-P): -Emotional control, parent rating: 0.89 (0.34, 1.44); boys =2.16 (1.32, 2.99), girls = -0.03 (-0.74, 0.68), sex int. p=<0.01. -Inhibition, parent rating: 0.71 (0.03, 1.39); boys = 1.88 (0.84, 2.92), girls = -0.15 (-1.04, 0.74), sex int. p=<0.01. -Working memory, teacher rating: overall ns; boys = 1.33 (2.40, 0.26), girls = 0.69 (-0.22, 1.59), sex int p<0.01. Clinic assessments (Stanford-Binet [SB5}, Cookie Delay Task [CDT] or NEPSY statue task: -Inhibition, NEPSY: overall ns; boys = -0.18 (0.29, 0.08), girls = 0.12 (0.01, 0.24), sex int. p=<0.01. -Non-verbal working memory, SB5: overall ns; boys = 0.17 (0.06,0.28), girls = -0.05(-0.15, 0.04), sex int. p=<0.01.. Prenatal MiBP was associated with significantly higher parent ratings of preschool executive function and cognition. This included ratings for poor emotional control and inhibition. Associations were stronger among boys vs. girls for parent-reported emotional control and inhibition. MiBP was also associated with significantly higher teacher ratings for working memory symptoms in boys. Higher MiBP was also associated with significantly poorer ratings for clinical assessments of inhibition in girls, and non-verbal working memory in boys..	Choi et. al 2021 8010273 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Delayed development based on the Ages and Stages Questionnaires-3 (ASQ-3), scores that fell into Gray (infant developing in the borderline of expectations) or Black (infant performance below expectations) areas in at least one of the following domains - communication, gross motor, fine motor, problem solving, personal-social.	Health Effect: Reproductive/Developmental-Delayed development based on the Ages and Stages Questionnaires-3 (ASQ-3), scores that fell into Gray (infant developing in the borderline of expectations) or Black (infant performance below expectations) areas in at least one of the following domains - communication, gross motor, fine motor, problem solving, personal-social.-Non-cancer-Neurological/Behavioral-Delayed development based on the Ages and Stages Questionnaires-3 (ASQ-3), scores that fell into Gray (infant developing in the borderline of expectations) or Black (infant performance below expectations) areas in at least one of the following domains - communication, gross motor, fine motor, problem solving, personal-social.-Non-cancer. Outcome measure: Ages and Stages Questionnaire Edition 3 (ASQ-3)	General public. Infant (0-1), Adults (18+). China; Shanghai. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Infants (birth through < 12 months). Mother-infant pairs from three districts in Shanghai, China (enrolled n=154 pairs; used in analysis n=138). March-May 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at baseline (infant age ranged from 1 to 9 months) and at follow-up (infant age 9 months).	Logistic Regression. Confounders adjusted for: age, sex, BMI, feeding pattern.	Lowest exposure concentration for a significant adverse health outcome response: continuous. MnBP (OR (95% CI))Communication: 2.84 (1.44, 5.60)Gross motor: 4.64 (2.18, 9.90)Fine motor: 1.82 (1.11, 2.98)Problem solving: 2.32 (1.28, 4.18)Personal-social: 2.64 (1.43, 4.86)Combined (below expectations in at least one of the above domains): 4.59 (2.52, 8.37). Significant positive associations between DBP metabolite, MnBP, and ASQ-3 scores below expectations were reported for all developmental domains (communication, gross motor, fine motor, problem solving, personal-social).	Dong et. al 2019 5559180 High

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Falling below developmental expectations based on the Ages and Stages Questionnaires Edition 3 domains (communication, gross motor, fine motor, problem solving, and personal-social)	Health Effect: Reproductive/Developmental-Delayed development based on the Ages and Stages Questionnaires-3 (ASQ-3), scores that fell into Gray (infant developing in the borderline of expectations) or Black (infant performance below expectations) areas in at least one of the following domains - communication, gross motor, fine motor, problem solving, personal-social.-Non-cancer-Neurological/Behavioral-Delayed development based on the Ages and Stages Questionnaires-3 (ASQ-3), scores that fell into Gray (infant developing in the borderline of expectations) or Black (infant performance below expectations) areas in at least one of the following domains - communication, gross motor, fine motor, problem solving, personal-social.-Non-cancer. Outcome measure: Ages and Stages Questionnaire Edition 3	General public. Infant (0-1), Adults (18+). China; Shanghai. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Infants (birth through < 12 months). Mother-infant pairs from three districts in Shanghai, China (enrolled n=154 pairs; used in analysis n=138). March-May 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at baseline (infant age ranged from 1 to 9 months) and at follow-up (infant age 9 months).	Logistic Regression. Confounders adjusted for: age, sex, BMI, feeding pattern.	Lowest exposure concentration for a significant adverse health outcome response: continuous. MBzP (OR (95% CI))Gross motor: 1.89 (1.17, 3.05)Combined (below expectations in at least one of the above domains): 1.77 (1.16, 2.71). Significant positive associations between MBzP and ASQ-3 scores below expectations were reported for the gross motor developmental domain..	Dong et. al 2019 5559180 High

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Falling below developmental expectations based on the Ages and Stages Questionnaires Edition 3 domains (communication, gross motor, fine motor, problem solving, and personal-social)	Health Effect: Reproductive/Developmental-Delayed development based on the Ages and Stages Questionnaires-3 (ASQ-3), scores that fell into Gray (infant developing in the borderline of expectations) or Black (infant performance below expectations) areas in at least one of the following domains - communication, gross motor, fine motor, problem solving, personal-social.-Non-cancer-Neurological/Behavioral-Delayed development based on the Ages and Stages Questionnaires-3 (ASQ-3), scores that fell into Gray (infant developing in the borderline of expectations) or Black (infant performance below expectations) areas in at least one of the following domains - communication, gross motor, fine motor, problem solving, personal-social.-Non-cancer. Outcome measure: Ages and Stages Questionnaire Edition 3	General public. Infant (0-1), Adults (18+). China; Shanghai. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Infants (birth through < 12 months). Mother-infant pairs from three districts in Shanghai, China (enrolled n=154 pairs; used in analysis n=138). March-May 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at baseline (infant age ranged from 1 to 9 months) and at follow-up (infant age 9 months).	Logistic Regression. Confounders adjusted for: age, sex, BMI, feeding pattern.	Lowest exposure concentration for a significant adverse health outcome response: continuous. MEOHP (OR (95% CI))Gross motor: 1.76 (1.06, 2.93)Combined (below expectations in at least one of the above domains): 1.70 (1.10, 2.62)MECPP (OR (95% CI))Gross motor: 1.71 (1.05, 2.76)MEHHP (OR (95% CI))Gross motor: 1.69 (1.07, 2.67)Personal-social: 1.85 (1.09, 3.12)Combined: 1.62 (1.10, 2.39)MCMHP (OR (95% CI))Gross motor: 1.75 (1.11, 2.77)Combined: 1.52 (1.03, 2.24). Significant positive associations between 4 of 5 DEHP metabolites and ASQ-3 scores below expectations were reported for the gross motor domain (except MEHP), with MEHHP also being associated with the personal-social domain.	Dong et. al 2019 5559180 High

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Delayed development based on the Ages and Stages Questionnaires-3 (ASQ-3), scores that fell into Gray (infant developing in the borderline of expectations) or Black (infant performance below expectations) areas in at least one of the following domains - communication, gross motor, fine motor, problem solving, personal-social.	Health Effect: Reproductive/Developmental-Delayed development based on the Ages and Stages Questionnaires-3 (ASQ-3), scores that fell into Gray (infant developing in the borderline of expectations) or Black (infant performance below expectations) areas in at least one of the following domains - communication, gross motor, fine motor, problem solving, personal-social.-Non-cancer-Neurological/Behavioral-Delayed development based on the Ages and Stages Questionnaires-3 (ASQ-3), scores that fell into Gray (infant developing in the borderline of expectations) or Black (infant performance below expectations) areas in at least one of the following domains - communication, gross motor, fine motor, problem solving, personal-social.-Non-cancer. Outcome measure: Ages and Stages Questionnaire Edition 3 (ASQ-3)	General public. Infant (0-1), Adults (18+). China; Shanghai. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Infants (birth through < 12 months). Mother-infant pairs from three districts in Shanghai, China (enrolled n=154 pairs; used in analysis n=138). March-May 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at baseline (infant age ranged from 1 to 9 months) and at follow-up (infant age 9 months).	Logistic Regression. Confounders adjusted for: age, sex, BMI, feeding pattern.	Lowest exposure concentration for a significant adverse health outcome response: continuous. MiBP (OR (95% CI))Communication: 2.73 (1.40, 5.30)Gross motor: 3.75 (1.93, 7.30)Fine motor: 2.23 (1.26, 3.96)Problem solving: 2.63 (1.38, 5.03)Personal-social: 3.17 (1.58, 6.36)Combined: 3.91 (2.27, 6.75). Significant positive associations between DIBP metabolite, MiBP, and ASQ-3 scores below expectations were reported for all developmental domains (communication, gross motor, fine motor, problem solving, personal-social).	Dong et. al 2019 5559180 High

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Delayed development based on the Ages and Stages Questionnaires-3 (ASQ-3), scores that fell into Gray (infant developing in the borderline of expectations) or Black (infant performance below expectations) areas in at least one of the following domains - communication, gross motor, fine motor, problem solving, personal-social.	Health Effect: Reproductive/Developmental-Delayed development based on the Ages and Stages Questionnaires-3 (ASQ-3), scores that fell into Gray (infant developing in the borderline of expectations) or Black (infant performance below expectations) areas in at least one of the following domains - communication, gross motor, fine motor, problem solving, personal-social.-Non-cancer-Neurological/Behavioral-Delayed development based on the Ages and Stages Questionnaires-3 (ASQ-3), scores that fell into Gray (infant developing in the borderline of expectations) or Black (infant performance below expectations) areas in at least one of the following domains - communication, gross motor, fine motor, problem solving, personal-social.-Non-cancer. Outcome measure: Ages and Stages Questionnaire Edition 3 (ASQ-3)	General public. Infant (0-1), Adults (18+). China; Shanghai. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Infants (birth through < 12 months). Mother-infant pairs from three districts in Shanghai, China (enrolled n=154 pairs; used in analysis n=138). March-May 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at baseline (infant age ranged from 1 to 9 months) and at follow-up (infant age 9 months).	Logistic Regression. Confounders adjusted for: age, sex, BMI, feeding pattern.	Lowest exposure concentration for a significant adverse health outcome response: continuous. MiBP (OR (95% CI))Communication: 2.73 (1.40, 5.30)Gross motor: 3.75 (1.93, 7.30)Fine motor: 2.23 (1.26, 3.96)Problem solving: 2.63 (1.38, 5.03)Personal-social: 3.17 (1.58, 6.36)Combined: 3.91 (2.27, 6.75). Significant positive associations between DIBP metabolite, MiBP, and ASQ-3 scores below expectations were reported for all developmental domains (communication, gross motor, fine motor, problem solving, personal-social).	Dong et. al 2019 5559180 High

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Delayed development based on the Ages and Stages Questionnaires-3 (ASQ-3), scores that fell into Gray (infant developing in the borderline of expectations) or Black (infant performance below expectations) areas in at least one of the following domains - communication, gross motor, fine motor, problem solving, personal-social.	Health Effect: Reproductive/Developmental-Delayed development based on the Ages and Stages Questionnaires-3 (ASQ-3), scores that fell into Gray (infant developing in the borderline of expectations) or Black (infant performance below expectations) areas in at least one of the following domains - communication, gross motor, fine motor, problem solving, personal-social.-Non-cancer-Neurological/Behavioral-Delayed development based on the Ages and Stages Questionnaires-3 (ASQ-3), scores that fell into Gray (infant developing in the borderline of expectations) or Black (infant performance below expectations) areas in at least one of the following domains - communication, gross motor, fine motor, problem solving, personal-social.-Non-cancer. Outcome measure: Ages and Stages Questionnaire Edition 3 (ASQ-3)	General public. Infant (0-1), Adults (18+). China; Shanghai. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Infants (birth through < 12 months). Mother-infant pairs from three districts in Shanghai, China (enrolled n=154 pairs; used in analysis n=138). March-May 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at baseline (infant age ranged from 1 to 9 months) and at follow-up (infant age 9 months).	Logistic Regression. Confounders adjusted for: age, sex, BMI, feeding pattern.	Lowest exposure concentration for a significant adverse health outcome response: continuous. MnBP (OR (95% CI))Communication: 2.84 (1.44, 5.60)Gross motor: 4.64 (2.18, 9.90)Fine motor: 1.82 (1.11, 2.98)Problem solving: 2.32 (1.28, 4.18)Personal-social: 2.64 (1.43, 4.86)Combined (below expectations in at least one of the above domains): 4.59 (2.52, 8.37). Significant positive associations between DBP metabolite, MnBP, and ASQ-3 scores below expectations were reported for all developmental domains (communication, gross motor, fine motor, problem solving, personal-social).	Dong et. al 2019 5559180 High

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Falling below developmental expectations based on the Ages and Stages Questionnaires Edition 3 domains (communication, gross motor, fine motor, problem solving, and personal-social)	Health Effect: Reproductive/Developmental-Delayed development based on the Ages and Stages Questionnaires-3 (ASQ-3), scores that fell into Gray (infant developing in the borderline of expectations) or Black (infant performance below expectations) areas in at least one of the following domains - communication, gross motor, fine motor, problem solving, personal-social.-Non-cancer-Neurological/Behavioral-Delayed development based on the Ages and Stages Questionnaires-3 (ASQ-3), scores that fell into Gray (infant developing in the borderline of expectations) or Black (infant performance below expectations) areas in at least one of the following domains - communication, gross motor, fine motor, problem solving, personal-social.-Non-cancer. Outcome measure: Ages and Stages Questionnaire Edition 3	General public. Infant (0-1), Adults (18+). China; Shanghai. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Infants (birth through < 12 months). Mother-infant pairs from three districts in Shanghai, China (enrolled n=154 pairs; used in analysis n=138). March-May 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at baseline (infant age ranged from 1 to 9 months) and at follow-up (infant age 9 months).	Logistic Regression. Confounders adjusted for: age, sex, BMI, feeding pattern.	Lowest exposure concentration for a significant adverse health outcome response: continuous. MBzP (OR (95% CI))Gross motor: 1.89 (1.17, 3.05)Combined (below expectations in at least one of the above domains): 1.77 (1.16, 2.71). Significant positive associations between MBzP and ASQ-3 scores below expectations were reported for the gross motor developmental domain..	Dong et. al 2019 5559180 High

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Falling below developmental expectations based on the Ages and Stages Questionnaires Edition 3 domains (communication, gross motor, fine motor, problem solving, and personal-social)	Health Effect: Reproductive/Developmental-Delayed development based on the Ages and Stages Questionnaires-3 (ASQ-3), scores that fell into Gray (infant developing in the borderline of expectations) or Black (infant performance below expectations) areas in at least one of the following domains - communication, gross motor, fine motor, problem solving, personal-social.-Non-cancer-Neurological/Behavioral-Delayed development based on the Ages and Stages Questionnaires-3 (ASQ-3), scores that fell into Gray (infant developing in the borderline of expectations) or Black (infant performance below expectations) areas in at least one of the following domains - communication, gross motor, fine motor, problem solving, personal-social.-Non-cancer. Outcome measure: Ages and Stages Questionnaire Edition 3	General public. Infant (0-1), Adults (18+). China; Shanghai. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Infants (birth through < 12 months). Mother-infant pairs from three districts in Shanghai, China (enrolled n=154 pairs; used in analysis n=138). March-May 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at baseline (infant age ranged from 1 to 9 months) and at follow-up (infant age 9 months).	Logistic Regression. Confounders adjusted for: age, sex, BMI, feeding pattern.	Lowest exposure concentration for a significant adverse health outcome response: continuous. MEOHP (OR (95% CI))Gross motor: 1.76 (1.06, 2.93)Combined (below expectations in at least one of the above domains): 1.70 (1.10, 2.62)MECPP (OR (95% CI))Gross motor: 1.71 (1.05, 2.76)MEHHP (OR (95% CI))Gross motor: 1.69 (1.07, 2.67)Personal-social: 1.85 (1.09, 3.12)Combined: 1.62 (1.10, 2.39)MCMHP (OR (95% CI))Gross motor: 1.75 (1.11, 2.77)Combined: 1.52 (1.03, 2.24). Significant positive associations between 4 of 5 DEHP metabolites and ASQ-3 scores below expectations were reported for the gross motor domain (except MEHP), with MEHHP also being associated with the personal-social domain.	Dong et. al 2019 5559180 High

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Type 2 diabetes mellitus	Health Effect: Nutritional/Metabolic-Type 2 diabetes mellitus-Non-cancer. Outcome measure: Blood test (fasting glucose and HbA1c)	General public, Patients in clinics. Adults (18+), Older Adults (65+). China; Tianjin. Female, Male. Case-Control. PESS: . Cases with type 2 diabetes mellitus and healthy controls (n=250 cases, n=250 controls). 2016-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at an unspecified point in time after diagnosis (case-control design).	Logistic Regression. Confounders adjusted for: sex, age, body mass index, urinary creatinine, smoking and alcohol-drinking status, exercising status, education level, family history of diabetes, blood pressure.	Lowest exposure concentration for a significant adverse health outcome response: MECPP: Q4 (>6.59 ng/mL), MCMHP: Q3 (12.96-25.61 ng/mL); MEHHP: Q2 (1.48-3.01 ng/mL); MEOHP: Q2 (1.12-1.88 ng/mL); MEHP: Q2 (1.34-3.72n ng/mL); sum DEHP metabolites: Q3 (0.13-0.26 nmol/mL). OR (95% CI): MECPPQ2 vs. Q1: 1.00 (0.53, 1.91)Q3 vs. Q1: 0.60 (0.31, 1.15)Q4 vs. Q1: 0.46 (0.24, 0.88)MCMHPQ2 vs. Q1: 0.62 (0.32, 1.21)Q3 vs. Q1: 0.46 (0.23, 0.92)Q4 vs. Q1: 0.44 (0.22, 0.89)MEHHPQ2 vs. Q1: 3.00 (1.61, 5.56)Q3 vs. Q1: 2.26 (1.23, 4.13)Q4 vs. Q1: 2.09 (1.15, 3.82)MEOHPQ2 vs. Q1: 6.94 (3.71, 12.99)Q3 vs. Q1: 5.92 (3.19, 10.99)Q4 vs. Q1: 4.94 (2.68, 9.10)MEHPQ2 vs. Q1: 0.47 (0.26, 0.85)Q3 vs. Q1: 0.71 (0.40, 1.28)Q4 vs. Q1: 12.89 (6.04, 27.52)Sum of DEHP metabolitesQ2 vs. Q1: 1.80 (0.89, 3.66)Q3 vs. Q1: 2.07 (1.03, 4.16)Q4 vs. Q1: 8.89 (4.14, 19.05). Significant positive associations for MEHHP, MEOHP, and sum of DEHP metabolites. Significant inverse associations for MECPP and MCMHP. MEHP significant inverse for Q2 vs. Q1, inverse but not significant Q3 vs. Q1, and significant positive for Q4 vs. Q1..	Duan et. al 2019 5499698 Medium
Type 2 diabetes mellitus	Health Effect: Nutritional/Metabolic-Type 2 diabetes mellitus-Non-cancer. Outcome measure: Blood test (fasting glucose and HbA1c)	General public, Patients in clinics. Adults (18+), Older Adults (65+). China; Tianjin. Female, Male. Case-Control. PESS: . Cases with type 2 diabetes mellitus and healthy controls (n=250 cases, n=250 controls). 2016-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at an unspecified point in time after diagnosis (case-control design).	Logistic Regression. Confounders adjusted for: sex, age, body mass index, urinary creatinine, smoking and alcohol-drinking status, exercising status, education level, family history of diabetes, blood pressure.	Lowest exposure concentration for a significant adverse health outcome response: Q3 (20.71-49.51 ng/mL). OR (95% CI): Q2 vs. Q1: 1.06 (0.55, 2.05)Q3 vs. Q1: 6.92 (3.59, 13.32)Q4 vs. Q1: 40.53 (16.69, 98.43). Significant positive associations for Q3 and Q4 vs. Q1..	Duan et. al 2019 5499698 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Fasting glucose and HbA1c	Health Effect: Nutritional/Metabolic-glycosylated hemoglobin (HbA1c), fasting glucose-Non-cancer. Outcome measure: Blood test	General public, Patients in clinics. Adults (18+), Older Adults (65+). China; Tianjin. Female, Male. Case-Control. PESS: . Healthy controls (n=250). 2016-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at an unspecified point in time after diagnosis (case-control design).	Linear Regression. Confounders adjusted for: sex, age, body mass index, urinary creatinine, smoking and alcohol-drinking status, exercising status, education level, family history of diabetes, blood pressure.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI):MEHHP and HbA1c: 0.013 (0.003, 0.023)MEHP and fasting glucose: 0.009 (0.002, 0.016). Significant positive associations for MEHHP and HbA1c and for MEHP and fasting glucose among controls. No significant associations for other DEHP metabolites or for sum of DEHP metabolites..	Duan et. al 2019 5499698 Medium
Attention-Deficit/Hyperactive Disorder	Health Effect: Neurological/Behavioral-Attention Deficit Hyperactivity Disorder (ADHD)-Non-cancer. Outcome measure: Clinical exam	General public. Preschool (3-5). Norway. Female, Male. Case-Cohort. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Case-cohort of ADHD (260 cases, 115 girls; 549 non-cases, 275 girl) nested in the MoBa cohort. Participants were born in 2004-2008 and followed through age 3.8 years.. The Norwegian Mother, Father, and Child Cohort (MoBa). Recruitment: 2004-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Logistic Regression. Confounders adjusted for: Adjusted for specific gravity, analytic batch, child sex, maternal age, maternal education, parity, depression during pregnancy, maternal ADHD-like symptoms. Model 2 additionally adjusted for correlated metabolites (a) MiBP, MnBP, and MBzP co-adjusted for one another; (b) sumDEHP and sumDiNP coadjusted for each other..	Lowest exposure concentration for a significant adverse health outcome response: continuous. Adjusted OR (95% CI) for odds of ADHD per ln-unit increase in DEHP: -Model 1 (multivariate): overall = 1.22 (0.99 to 1.52); boys =1.32 (1.00 to 1.74); girls = 1.10 (0.78 to 1.55). p=0.42 for sex differences. -Model 2 (additionally adjusted for phthalates co-exposure): overall = 1.18 (0.93 to 1.49); boys = 1.28 (0.95 to 1.73); girls =1.03 (0.70 to 1.51). p=0.37 for sex differences. Quintile analysis, model 2: OR (95% CI) for odds of ADHD vs. Q1 (<0.15 umol/L): Q2 (0.16–0.21 μmol/L) = 1.28 (0.76 to 2.15) Q3 (0.21–0.27 μmol/L) = 1.15 (0.68 to 1.97) Q4 (0.27–0.38 μmol/L) = 1.19 (0.70 to 2.03) Q5 (>0.38 μmol/L) = 1.51 (0.89 to 2.56). Significant positive association in odds of preschool ADHD per ln-unit increase in the sum of DEHP metabolites among boys; this association was marginally non-significant after additional adjustment for phthalates co-exposure. Associations with DEHP were weaker and not significant among girls..	Kamai et. al 2021 9559555 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Attention-Deficit/Hyperactive Disorder	Health Effect: Neurological/Behavioral-Attention Deficit Hyperactivity Disorder (ADHD)-Non-cancer. Outcome measure: Clinical exam	General public. Preschool (3-5). Norway. Female, Male. Case-Cohort. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Case-cohort of ADHD (260 cases, 115 girls; 549 non-cases, 275 girl) nested in the MoBa cohort. Participants were born in 2004-2008 and followed through age 3.8 years.. The Norwegian Mother, Father, and Child Cohort (MoBa). Recruitment: 2004-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Linear Regression. Confounders adjusted for: Adjusted for specific gravity, analytic batch, child sex, maternal age, maternal education, parity, depression during pregnancy, maternal ADHD-like symptoms. Model 2 additionally adjusted for correlated metabolites (a) MiBP, MnBP, and MBzP co-adjusted for one another; (b) sumDEHP and sumDiNP coadjusted for each other..	Lowest exposure concentration for a significant adverse health outcome response: continuous. Adjusted OR (95% CI) for odds of ADHD per ln-unit increase in MBP: -Model 1 (multivariate): overall = 1.18 (0.95 to 1.45); boys = 1.42 (1.07 to 1.88); girls = 0.93 (0.68 to 1.28). p=0.05 for sex differences. -Model 2 (additionally adjusted for phthalates co-exposure): overall = 1.13 (0.84 to 1.52)); boys = 1.43 (0.97 to 2.10); girls = 0.82 (0.51 to 1.31). p=0.07 for sex differences.. Statistically significant positive association between MBP and odds of preschool ADHD only among boys. No evidence of an association with MBP in girls was found..	Kamai et. al 2021 9559555 Medium
Croup	Health Effect: Lung/Respiratory-Croup-Non-cancer. Outcome measure: Maternal report	Pregnant people. Infant (0-1), Adults (18+). Sweden; Varmland. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women recruited during their first visit to a public antenatal care center in Sweden and their infants (n=1,062 mother infant pairs). Swedish Environmental Longitudinal, Mother and Child, Asthma and Allergy study (SELMA). 2007-2010.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during early pregnancy (median gestational age = 10 weeks).	Logistic Regression. Confounders adjusted for: sex, mother's education, mother's age, asthma in the family, smoking, creatinine.	Lowest exposure concentration for a significant adverse health outcome response: Q2 (quartile range not reported). MBP and odds of croup in the first year of life. Girls: OR (95% CI) for Q2 vs. Q1: 0.30 (0.09–0.96)* OR (95% CI) for Q3 vs. Q1: 0.92 (0.37–2.28) OR (95% CI) for Q4 vs. Q1: 0.97 (0.39–2.36) Boys: OR (95% CI) for Q2 vs. Q1: 0.97 (0.46–2.09) OR (95% CI) for Q3 vs. Q1: 0.82 (0.38–1.73) OR (95% CI) for Q4 vs. Q1: 1.04 (0.51–2.12). Significant inverse association with croup or Q2 vs. Q1 of MBP among girls only. No significant associations for Q3 or Q4. No significant associations among boys only or among all study participants in unstratified analysis..	Shu et. al 2018 4728698 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Croup	Health Effect: Lung/Respiratory-Croup-Non-cancer. Outcome measure: Maternal report	Pregnant people. Infant (0-1), Adults (18+). Sweden; Varmland. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women recruited during their first visit to a public antenatal care center in Sweden and their infants (n=1,062 mother infant pairs). Swedish Environmental Longitudinal, Mother and Child, Asthma and Allergy study (SELMA). 2007-2010.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during early pregnancy (median gestational age = 10 weeks).	Logistic Regression. Confounders adjusted for: sex, mother's education, mother's age, asthma in the family, smoking, creatinine.	Lowest exposure concentration for a significant adverse health outcome response: Q4 (quartile range not reported). MBzP and odds of croup in the first year of life. Analysis among all participants: OR (95% CI) for Q2 vs. Q1: 0.83 (0.43–1.63) OR (95% CI) for Q3 vs. Q1: 1.43 (0.78–2.61) OR (95% CI) for Q4 vs. Q1: 1.83 (1.02–3.30)* Analysis among boys only: OR (95% CI) for Q2 vs. Q1: 1.45 (0.61–3.46) OR (95% CI) for Q3 vs. Q1: 2.10 (0.92–4.79) OR (95% CI) for Q4 vs. Q1: 3.35 (1.49–7.54)*. Significant positive associations with croup for Q4 vs. Q1 of MBzP among all study participants and among boys only. Results were positive but not significant for Q3 vs. Q1. No significant associations among girls only..	Shu et. al 2018 4728698 Medium

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Diethylhexyl Phthalate

Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP); Mono-(2-ethyl-5-carboxypentyl)phthalate (MECPP); Mono-[2-(carboxymethyl)hexyl]phthalate (MCMHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Croup	Health Effect: Lung/Respiratory-Croup-Non-cancer. Outcome measure: Maternal report	Pregnant people. Infant (0-1), Adults (18+). Sweden; Varmland. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant women recruited during their first visit to a public antenatal care center in Sweden and their infants (n=1,062 mother infant pairs). Swedish Environmental Longitudinal, Mother and Child, Asthma and Allergy study (SELMA). 2007-2010.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during early pregnancy (median gestational age = 10 weeks).	Logistic Regression. Confounders adjusted for: sex, mother's education, mother's age, asthma in the family, smoking, creatinine.	Lowest exposure concentration for a significant adverse health outcome response: MEHHP: Q3 (quartile range not reported); MEHP, MEOHP, MECPP, MCMHP: Q4 (quartile ranges not reported). DEHP metabolites and odds of croup in the first year of life. MEHP, analysis among all participants:OR (95% CI) for Q2 vs. Q1: 1.15 (0.61–2.17)OR (95% CI) for Q3 vs. Q1: 1.15 (0.61–2.16)OR (95% CI) for Q4 vs. Q1: 1.96 (1.09–3.54)* MEHHP, analysis among all participants:OR (95% CI) for Q2 vs. Q1: 1.46 (0.73–2.89)OR (95% CI) for Q3 vs. Q1: 1.96 (1.02–3.79)* OR (95% CI) for Q4 vs. Q1: 2.59 (1.37–4.90)* MEHHP, analysis among boys only:OR (95% CI) for Q2 vs. Q1: 1.36 (0.56–3.33)OR (95% CI) for Q3 vs. Q1: 2.36 (1.02–5.45)* OR (95% CI) for Q4 vs. Q1: 3.04 (1.33–6.94)* MEOHP, analysis among all participants:OR (95% CI) for Q2 vs. Q1: 1.29 (0.67–2.50)OR (95% CI) for Q3 vs. Q1: 1.52 (0.80–2.90)OR (95% CI) for Q4 vs. Q1: 2.27 (1.23–4.19)* MEOHP, analysis among boys only:OR (95% CI) for Q2 vs. Q1: 1.23 (0.54–2.83)OR (95% CI) for Q3 vs. Q1: 1.59 (0.71–3.55)OR (95% CI) for Q4 vs. Q1: 2.36 (1.08–5.17)* MECPP, analysis among all participants:OR (95% CI) for Q2 vs. Q1: 1.34 (0.68–2.64)OR (95% CI) for Q3 vs. Q1: 1.71 (0.89–3.26)OR (95% CI) for Q4 vs. Q1: 2.46 (1.32–4.61)* MECPP, analysis among girls only:OR (95% CI) for Q2 vs. Q1: 2.00 (0.58–6.82)OR (95% CI) for Q3 vs. Q1: 2.25 (0.65–7.72)OR (95% CI) for Q4 vs. Q1: 3.93 (1.27–12.18)* MCMHP, analysis among all participants:OR (95% CI) for Q2 vs. Q1: 1.34 (0.69–2.58)OR (95% CI) for Q3 vs. Q1: 1.72 (0.91–3.23)OR (95% CI) for Q4 vs. Q1: 2.02 (1.09–3.76)* MCMHP, analysis among boys only: OR (95% CI) for Q2 vs. Q1: 1.38 (0.57–3.36)OR (95% CI) for Q3 vs. Q1: 2.14 (0.94–4.89)OR (95% CI) for Q4 vs. Q1: 2.40 (1.04–5.55)*. Significant positive associations with odds of croup for Q4 vs. Q1 for all DEHP metabolites for analyses of the entire study population. Associations remained significant in analyses restricted to boys only for MEHP, MEHHP, MEOHP, and MCMHP, but were not significant among girls. For MECPP, associations were significant among girls but not boys. For MEHHP, associations were also significant for Q3 vs. Q1..	Shu et. al 2018 4728698 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
NNNS Subscale - Attention	Health Effect: Reproductive/Developmental-NICU Network Neurobehavioral Scale (NNNS) components including habituation, attention, handling, non-optimal reflexes, regulation, excitability, quality of movement, stress/abstinence, arousal, lethargy, hypertonicity, hypotonicity, asymmetric reflexes-Non-cancer-Neurological/Behavioral-NICU Network Neurobehavioral Scale (NNNS) components including habituation, attention, handling, non-optimal reflexes, regulation, excitability, quality of movement, stress/abstinence, arousal, lethargy, hypertonicity, hypotonicity, asymmetric reflexes-Non-cancer. Outcome measure: NICU Network Neurobehavioral Scale (NNNS)	Patients in clinics, Pregnant people. Infant (0-1), Adults (18+). United States; New York. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Infants (birth through < 12 months). Very low birth weight infants in the NICU at Mount Sinai Hospital (Enrolled=81, Used in analysis=64). NICU-Hospital Exposures and Long-Term Health Study (NICU-HEALTH). 2011-2013.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured weekly prior to outcome assessment.	Linear Regression. Confounders adjusted for: infant gender, gestational age at birth, status as small for gestational age, largest base deficit in the first 24-hours, composite score of NICU-based morbidity.	Lowest exposure concentration for a significant adverse health outcome response: continuous (exposure distribution for sum DEHP metabolites not provided). Beta value (95% CI) per 10 ng/mL increase in sum DEHP: 0.22 (0.11, 0.36); Holm-Bonferroni p-value = 0.01. Significant positive relationship between sum of DEHP metabolites and attention summary scale of the NNNS. A positive significant association was also observed for the regulation summary scale (p=0.03), but this association was not significant after correction for multiple comparisons (Holm-Bonferroni p-value=0.18). No other summary scales reported significant results..	Stroustrup et. al 2018 4728711 Medium

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Time from ovulation to implantation, hCG rise, type of corpus luteum "rescue" (sustained ovarian progesterone production)	Health Effect: Reproductive/Developmental-Early pregnancy outcome measures: time from ovulation to implantation, pattern of human chorionic gonadotropin (hCG) hormone rise (an early indicator of pregnancy), and type of ovarian corpus luteum "rescue" (timing and pattern of ovarian progesterone rise, necessary for maintaining an early pregnancy)-Non-cancer. Outcome measure: Urinary measures of major metabolites of estrogen (estrone 3-glucuronide (E1G)) and progesterone (pregnanediol 3-glucuronide (PdG), along with human chorionic gonadotropin (hCG) hormone.	Pregnant people. Adults (18+). United States; North Carolina. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 137 healthy women without known fertility problems in the North Carolina Early Pregnancy Study, 1982-1986. Women enrolled from the time they discontinued birth control and followed for up to 6 months for the occurrence of a clinical pregnancy.. North Carolina Early Pregnancy Study (EPS). 1982-1986.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Short-term (between 24 hours and less than 28 days) Exposure measured during the conception cycle.	Linear Regression. Confounders adjusted for: None (considered but excluded age, smoking status, BMI).	Lowest exposure concentration for a significant adverse health outcome response: >32.2 ng/mg creatinine. Elevated MBzP (above the median) was associated with a significantly faster rate of hCG rise (p=0.04) [Figure 1, quantitative effect estimates not shown].. -Elevated MBzP (above the median) was associated with a significantly faster rate of hCG rise (p=0.04). -Time from ovulation to implantation and type of corpus luteum rescue were not significantly associated with MBzP..	Chin et. al 2019 5043528 Medium
Time from ovulation to implantation, hCG rise, type of corpus luteum "rescue" (sustained ovarian progesterone production)	Health Effect: Reproductive/Developmental-Early pregnancy outcome measures: time from ovulation to implantation, pattern of human chorionic gonadotropin (hCG) hormone rise (an early indicator of pregnancy), and type of ovarian corpus luteum "rescue" (timing and pattern of ovarian progesterone rise, necessary for maintaining an early pregnancy)-Non-cancer. Outcome measure: Urinary measures of major metabolites of estrogen (estrone 3-glucuronide (E1G)) and progesterone (pregnanediol 3-glucuronide (PdG), along with human chorionic gonadotropin (hCG) hormone.	Pregnant people. Adults (18+). United States; North Carolina. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). 137 healthy women without known fertility problems in the North Carolina Early Pregnancy Study, 1982-1986. Women enrolled from the time they discontinued birth control and followed for up to 6 months for the occurrence of a clinical pregnancy.. North Carolina Early Pregnancy Study (EPS). 1982-1986.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Short-term (between 24 hours and less than 28 days) Exposure measured during the conception cycle.	Logistic Regression. Confounders adjusted for: None (considered but excluded age, smoking status, BMI).	Lowest exposure concentration for a significant adverse health outcome response: Continuous. OR (95% CI) per unit increase in ln-transformed MiBP and time from ovulation to implantation (ref = 9 days): -Early implantation (6-8 days) = 2.09 (1.18, 3.69)-Late implantation (10-12 days) = 0.79 (0.35, 1.82). -MiBP was associated increased odds of a significantly earlier time from ovulation to implantation. -There was no significant associations between MiBP and either hCG rise or type of corpus luteum rescue..	Chin et. al 2019 5043528 Medium

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Metabolite: Sum DEHP [Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP); Mono-(2-ethyl-5-carboxypentyl)phthalate (MECPP)]

Diethylhexyl Phthalate

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
FT3	Health Effect: Thyroid-TSH, TT4, TT3, FT4, FT3-Non-cancer. Outcome measure: Clinical immunoassay analyzer	General public, Pregnant people. Infant (0-1), Adults (18+). United States; Cincinnati, Ohio. Female, Male. Cohort (Retrosepctive). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant mothers enrolled in the HOME study from March 2003-January 2006 (Enrolled n=468, Followed to birth of singleton pregnancies n=389, Used in analysis n=276).. HOME (Health Outcomes and Measures of the Environment). March 2003-January 2006.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at 16 and 26 weeks of gestation, and at birth.	Linear Regression. Confounders adjusted for: maternal age at delivery, race, education, marital status, household income, parity, serum cotinine during pregnancy, body mass index, prenatal vitamin use, infant sex, average of log10- maternal urinary bisphenol A, gestational age at delivery, and mode of delivery.	Lowest exposure concentration for a significant adverse health outcome response: continuous; median sum DEHP (ug/g creatinine) = 93. Percent difference (95% CI) in cord serum FT3 per 10-fold increase in maternal urinary sum DEHP (adjusted for PCBs and BDEs): -11.0 (-0.21, -0.01). Significant negative associations were reported for urinary sum DEHP and at birth cord blood Ln((FT3) when co-exposure to PCB-153, BDE-28, and BDE-47 were controlled . No significant results were reported for maternal thyroid hormones..	Romano et. al 2018 4728848 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
TSH	Health Effect: Thyroid-TSH, TT4, TT3, FT4, FT3-Non-cancer. Outcome measure: Clinical immunoassay analyzer	General public, Pregnant people. Infant (0-1), Adults (18+). United States; Cincinnati, Ohio. Female, Male. Cohort (Retrosepctive). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Pregnant mothers enrolled in the HOME study from March 2003-January 2006 (Enrolled n=468, Followed to birth of singleton pregnancies n=389, Used in analysis n=276).. HOME (Health Outcomes and Measures of the Environment). March 2003-January 2006.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at 16 and 26 weeks of gestation, and at birth.	Linear Regression. Confounders adjusted for: maternal age at delivery, race, education, marital status, household income, parity, serum cotinine during pregnancy, body mass index, prenatal vitamin use, infant sex, average of log10- maternal urinary bisphenol A, gestational age at delivery, and mode of delivery.	Lowest exposure concentration for a significant adverse health outcome response: continuous; median MBZP (ug/g creatinine) = 10. Percent difference (95% CI) in cord serum TSH per 10-fold increase in maternal urinary MBzP: -19.0 (-33.1, -1.9)Percent difference (95% CI) in cord serum TSH per 10-fold increase in maternal urinary MBzP (adjusted for PCBs and PBDEs): -19.8 (-34.7, -1.5). Significant negative associations were reported for urinary MBzP and at birth cord blood Ln(TSH) levels. No significant results were reported for maternal thyroid hormones..	Romano et. al 2018 4728848 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
CPT-3 and CPT-II scores for attention	Health Effect: Neurological/Behavioral-Conners' Continuous Performance Test, Second Edition (CPT-II) at age 6-11 years and an updated version of the Conners' CPT (CPT-3) at age 9-18 years-Non-cancer-Reproductive/Developmental-Conners' Continuous Performance Test, Second Edition (CPT-II) at age 6-11 years and an updated version of the Conners' CPT (CPT-3) at age 9-18 years-Non-cancer. Outcome measure: CPT-3 computer assessment	General public. Middle childhood (6-11), Teens (12-17), Adults (18+). Mexico; Mexico City. Female, Male. Cohort (Prospective), Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Mother-child pairs from the ELEMENT cohort (n = 491 in cross-sectional analysis). Early Life Exposure in Mexico to Environmental Toxicants (ELEMENT) cohort study. Recruitment: 1997-2004; Follow-up at child age 6-11 years and 9-18 years..	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during pregnancy and during adolescence (ages 9-18).	Linear Regression. Confounders adjusted for: child age at second follow-up visit, sex, years in school, maternal education, urinary specific gravity.	Lowest exposure concentration for a significant adverse health outcome response: continuous; GM (GSD) sum DEHP among adolescents = 0.31 (2.63) umol/L. Percent change (95% CI) in CPT-3 scores per IQR increase in adolescent Sum DEHP: HRT - variability: 1.7 (0.3, 3.1)HRT-SD: 2.4 (0.8, 4.1)HRT ISI Change: 1.9 (0.1, 3.6)Variability: 2.3 (0.6, 4.0). Significant positive associations for the sum of DEHP metabolites at adolescence and several attention scores from the CPT-3. Other indices positive but not significant. No significant results for maternal sum DEHP and any outcome measures, and results were not presented for specific DEHP metabolites..	Watkins et. al 2021 8348423 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
CPT-3 and CPT-II scores for attention	Health Effect: Neurological/Behavioral-Conners' Continuous Performance Test, Second Edition (CPT-II) at age 6-11 years and an updated version of the Conners' CPT (CPT-3) at age 9-18 years-Non-cancer-Reproductive/Developmental-Conners' Continuous Performance Test, Second Edition (CPT-II) at age 6-11 years and an updated version of the Conners' CPT (CPT-3) at age 9-18 years-Non-cancer. Outcome measure: CPT-3 computer assessment	General public. Middle childhood (6-11), Teens (12-17), Adults (18+). Mexico; Mexico City. Female, Male. Cohort (Prospective), Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Mother-child pairs from the ELEMENT cohort (n = 491 in cross-sectional analysis). Early Life Exposure in Mexico to Environmental Toxicants (ELEMENT) cohort study. Recruitment: 1997-2004; Follow-up at child age 6-11 years and 9-18 years..	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during pregnancy and during adolescence (ages 9-18).	Linear Regression. Confounders adjusted for: child age at second follow-up visit, sex, years in school, maternal education, urinary specific gravity.	Lowest exposure concentration for a significant adverse health outcome response: continuous; GM (GSD) MBzP among adolescents = 3.49 (2.74) ug/L. No descriptive data for prenatal phthalate measures.. Percent change (95% CI) in CPT-3 scores per IQR increase in prenatal MBzP: Omissions: 4.2 (0.3, 8.2)Percent change (95% CI) in CPT-3 scores per IQR increase in first trimester prenatal MBzP: HRT block change: 3.0 (0.6, 5.5). Significant positive associations for Omissions CPT-3 scores at adolescence in analyses with maternal urinary MBzP. When results were stratified by trimester-specific MBzP, direction of effect was maintained by results were not significant for Omissions. However, first-trimester MBzP was positive associated with HRT block change scores in aodlescence (positive but not significant when all trimesters were combined). Other indices were not significant..	Watkins et. al 2021 8348423 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
CPT-3 Response Style and Omissions scores at ages 9-18 years	Health Effect: Neurological/Behavioral-Conners' Continuous Performance Test, Second Edition (CPT-II) at age 6-11 years and an updated version of the Conners' CPT (CPT-3) at age 9-18 years-Non-cancer-Reproductive/Developmental-Conners' Continuous Performance Test, Second Edition (CPT-II) at age 6-11 years and an updated version of the Conners' CPT (CPT-3) at age 9-18 years-Non-cancer. Outcome measure: CPT-3 and CPT-II scores for attention	General public. Middle childhood (6-11), Teens (12-17), Adults (18+). Mexico; Mexico City. Female, Male. Cohort (Prospective), Cross-Sectional. PESS: Lifestage , Other PESS category specified in the reference. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Mother-child pairs from the ELEMENT cohort (n = 491 in cross-sectional analysis). Early Life Exposure in Mexico to Environmental Toxicants (ELEMENT) cohort study. Recruitment: 1997-2004; Follow-up at child age 6-11 years and 9-18 years..	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during pregnancy and during adolescence (ages 9-18).	Linear Regression. Confounders adjusted for: child age at second follow-up visit, sex, years in school, maternal education, urinary specific gravity.	Lowest exposure concentration for a significant adverse health outcome response: continuous; GM (GSD) MBP among adolescents = 124 (2.79) ug/L. No descriptive data for prenatal phthalate measures.. Percent change (95% CI) in CPT-3 scores per IQR increase in prenatal MBP: Response style: 3.7 (0.1, 7.3)Omissions: 4.5 (0.3, 8.8)Percent change (95% CI) in CPT-3 scores per IQR increase in prenatal first trimester MBP: HRT SD: 3.8 (0.7, 7)Variability: 4.5 (1.1, 8). Significant positive associations for Omissions and Response Style CPT-3 scores in analyses with maternal urinary MBP levels. When results were stratified by trimester-specific phthalate concentrations, both indices were positive but not significant. First-trimester MBP was also positively associated with HRT SD and variability CPT-3 scores. Other indices positive but not significant..	Watkins et. al 2021 8348423 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
CPT-3 and CPT-II scores for attention	Health Effect: Neurological/Behavioral-Conners' Continuous Performance Test, Second Edition (CPT-II) at age 6-11 years and an updated version of the Conners' CPT (CPT-3) at age 9-18 years-Non-cancer-Reproductive/Developmental-Conners' Continuous Performance Test, Second Edition (CPT-II) at age 6-11 years and an updated version of the Conners' CPT (CPT-3) at age 9-18 years-Non-cancer. Outcome measure: CPT-3 computer assessment	General public. Middle childhood (6-11), Teens (12-17), Adults (18+). Mexico; Mexico City. Female, Male. Cohort (Prospective), Cross-Sectional. PESS: Lifestage , Other PESS category specified in the reference. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Mother-child pairs from the ELEMENT cohort (n = 491 in cross-sectional analysis). Early Life Exposure in Mexico to Environmental Toxicants (ELEMENT) cohort study. Recruitment: 1997-2004; Follow-up at child age 6-11 years and 9-18 years..	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during pregnancy and during adolescence (ages 9-18).	Linear Regression. Confounders adjusted for: child age at second follow-up visit, sex, years in school, maternal education, urinary specific gravity.	Lowest exposure concentration for a significant adverse health outcome response: continuous; GM (GSD) MiBP among adolescents = 10.4 (2.63) ug/L. No descriptive data for prenatal phthalate measures.. Percent change (95% CI) in CPT-3 scores per IQR increase in prenatal MiBP: HRT ISI Change: 5.4 (0.7, 10)Variability: 5.5 (0.4, 10.9)Percent change (95% CI) in CPT-3 scores per IQR increase in prenatal first trimester MiBP: Variability: 5.2 (1, 9.6). Significant positive associations for ISI Change and Variability CPT-3 scores in analyses with maternal urinary MiBP. WHen stratified by trimester-specific phthalate concentrations, direction of effect but not significance was maintained for all indices other than variability, which maintained significance. Other indices positive but not significant..	Watkins et. al 2021 8348423 Medium

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Body mass index trajectory	Health Effect: Nutritional/Metabolic-Body Mass Index trajectory-Non-cancer. Outcome measure: Measured by research personnel	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Mexico; Mexico City. Male. Cohort (Prospective). PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). ELEMENT birth cohort (n=239) of moderate-to-low income residents of Mexico City. Early Life in Mexico to Environmental Toxicants (ELEMENT). Recruitment: 1997 - 2005; Follow-up: 2006-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Mixed effects models. Confounders adjusted for: maternal years of education, maternal BMI 1-month postpartum.	Lowest exposure concentration for a significant adverse health outcome response: Tertiles of MECPP [specific range per tertile not provided; GM (SD) in males = 31.9 (2.6) ng/mL; GM (SD) in females = 30.9 (2.9) ng/mL]. Likelihood ratio test results (-2LL using full model) for MECPP in females: 3749.6, p=0.005. Likelihood ratio test showed better fit for models in girls that included MECPP. There were not extreme differences in trajectory by prenatal MECPP tertile, but ”the third tertile of MECPP predicted the highest BMI trajectory by age 14, although prior to age 9 the highest level of exposure predicted the lowest BMI trajectory.” Sensitivity was reduced in ages past 5..	Yang et. al 2018 4728873 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Body mass index trajectory	Health Effect: Nutritional/Metabolic-Body Mass Index trajectory-Non-cancer. Outcome measure: Measured by research personnel	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Mexico; Mexico City. Male. Cohort (Prospective). PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). ELEMENT birth cohort (n=239) of moderate-to-low income residents of Mexico City. Early Life in Mexico to Environmental Toxicants (ELEMENT). Recruitment: 1997 - 2005; Follow-up: 2006-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Mixed effects models. Confounders adjusted for: maternal years of education, maternal BMI 1-month postpartum.	Lowest exposure concentration for a significant adverse health outcome response: Tertiles of MiBP [specific range per tertile not provided; GM (SD) in males = 1.8 (2.7) ng/mL; GM (SD) in females = 2.0 (2.9) ng/mL]. Likelihood ratio test results (-2LL using full model) for MiBP in males: 3373.3, p=0.004. Likelihood ratio test showed better fit for models in boys that included MiBP. The study reported that ”exposure to the first tertile of MiBP...predicted the lowest BMI trajectory in earlychildhood but crossed over to predict the highest BMI by age 14.” Sensitivity was reduced in ages past 5..	Yang et. al 2018 4728873 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Body mass index trajectory	Health Effect: Nutritional/Metabolic-Body Mass Index trajectory-Non-cancer. Outcome measure: Measured by research personnel	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Mexico; Mexico City. Male. Cohort (Prospective). PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). ELEMENT birth cohort (n=239) of moderate-to-low income residents of Mexico City. Early Life in Mexico to Environmental Toxicants (ELEMENT). Recruitment: 1997 - 2005; Follow-up: 2006-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Mixed effects models. Confounders adjusted for: maternal years of education, maternal BMI 1-month postpartum.	Lowest exposure concentration for a significant adverse health outcome response: Tertiles of MBzP [specific range per tertile not provided; GM (SD) in males = 4.3 (2.5) ng/mL; GM (SD) in females = 4.1 (2.7) ng/mL]. Likelihood ratio test results (-2LL using full model) for MBzP in males: 3372.6, p=0.003. Likelihood ratio test showed better fit for models in boys that included MBzP. There were not extreme differences in trajectory by prenatal MBzP tertile, but "Exposure to the first tertile of....MBzP predicted the lowest BMI trajectory in early childhood but crossed over to predict the highest BMI by age 14." Sensitivity was reduced for ages past 5..	Yang et. al 2018 4728873 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Body mass index trajectory	Health Effect: Nutritional/Metabolic-Body Mass Index trajectory-Non-cancer. Outcome measure: Measured by research personnel	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Mexico; Mexico City. Male. Cohort (Prospective). PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). ELEMENT birth cohort (n=239) of moderate-to-low income residents of Mexico City. Early Life in Mexico to Environmental Toxicants (ELEMENT). Recruitment: 1997 - 2005; Follow-up: 2006-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Mixed effects models. Confounders adjusted for: maternal years of education, maternal BMI 1-month postpartum.	Lowest exposure concentration for a significant adverse health outcome response: Tertiles of MEHP [specific range per tertile not provided; GM (SD) in males = 5.0 (3.5) ng/mL; GM (SD) in females = 5.2 (2.6) ng/mL]. Likelihood ratio test results (-2LL using full model) for MEHP in males: 3370.5, p=0.002. Likelihood ratio test showed better fit for models in boys that included MEHP. There were not extreme differences in trajectory by prenatal MEHP tertile, but ”the second tertile of exposure was consistently predictive of the highest BMItrajectory from early childhood on.” Sensitivity was reduced in ages past 5..	Yang et. al 2018 4728873 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Body mass index trajectory	Health Effect: Nutritional/Metabolic-Body Mass Index trajectory-Non-cancer. Outcome measure: Measured by research personnel	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Mexico; Mexico City. Male. Cohort (Prospective). PESS: Lifestage , Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). ELEMENT birth cohort (n=239) of moderate-to-low income residents of Mexico City. Early Life in Mexico to Environmental Toxicants (ELEMENT). Recruitment: 1997 - 2005; Follow-up: 2006-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Mixed effects models. Confounders adjusted for: maternal years of education, maternal BMI 1-month postpartum.	Lowest exposure concentration for a significant adverse health outcome response: Tertiles of MEHHP [specific range per tertile not provided; GM (SD) in males = 19.4 (3.6) ng/mL; GM (SD) in females = 19.1 (4.7) ng/mL]. Likelihood ratio test results (-2LL using full model) for MEHHP in males: 3372.8, p=0.004. Likelihood ratio test showed better fit for models in boys that included MEHHP. There were not extreme differences in trajectory by prenatal MEHHP tertile, but ”the second tertile of exposure was consistently predictive of the highest BMItrajectory from early childhood on.” Sensitivity was reduced in ages past 5..	Yang et. al 2018 4728873 Medium

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Rhinitis	Health Effect: Lung/Respiratory-Asthma and allergic indicators (wheezing, sneezing, rhinitis)-Non-cancer. Outcome measure: Questionnaire	General public. Preschool (3-5), Middle childhood (6-11). China; 6 administrative districts in Shanghai – 4 urban districts (Yang-Pu district, Hong-kou district, Jing-An district, and Zha-Bei district) and 2 suburban ones (Feng-Xian district and Bao-Shan district). Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Follow-up of children ages 5-10 from the CCHH study (2011-2012) in Shanghai, China (n=419). China, Children, Homes, Health (CCHH) project. Recruitment: 2011-2012; Follow-up: 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via morning urine samples.	Logistic Regression. Confounders adjusted for: gender, age, BMI, breastfeeding time, family smoking exposure, residence area, maternal education, annual household income, history of parental asthma, wall materials in children's bedrooms and floor materials in children's bedrooms..	Lowest exposure concentration for a significant adverse health outcome response: >144.0 ug/g. OR (95% CI) for Q4 vs. Q1: 2.23 (1.08 - 4.62)P-trend = 0.03. Significant positive associations were reported for Q4 MiBP values and the prevalence odds of rhinitis..	Shi et. al 2018 4829218 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Eczema	Health Effect: Skin/Connective Tissue-Eczema-Non-cancer. Outcome measure: Questionnaire	General public. Preschool (3-5), Middle childhood (6-11). China; 6 administrative districts in Shanghai – 4 urban districts (Yang-Pu district, Hong-kou district, Jing-An district, and Zha-Bei district) and 2 suburban ones (Feng-Xian district and Bao-Shan district). Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Follow-up of children ages 5-10 from the CCHH study (2011-2012) in Shanghai, China (n=419). China, Children, Homes, Health (CCHH) project. Recruitment: 2011-2012; Follow-up: 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via morning urine samples.	Logistic Regression. Confounders adjusted for: gender, age, BMI, breastfeeding time, family smoking exposure, residence area, maternal education, annual household income, history of parental asthma, wall materials in children's bedrooms and floor materials in children's bedrooms..	Lowest exposure concentration for a significant adverse health outcome response: 79.5-144.0 ug/g. OR (95% CI) for Q3 vs. Q1: 3.70 (1.31 - 10.47)OR (95% CI) for Q4 vs. Q1: 2.96 (1.02 - 8.60)P-trend = 0.01. Significant positive associations were reported for Q3 and Q4 MiBP values and the prevalence odds of eczema..	Shi et. al 2018 4829218 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Wheeze	Health Effect: Lung/Respiratory-Asthma and allergic indicators (wheezing, sneezing, rhinitis)-Non-cancer. Outcome measure: Questionnaire	General public. Preschool (3-5), Middle childhood (6-11). China; 6 administrative districts in Shanghai – 4 urban districts (Yang-Pu district, Hong-kou district, Jing-An district, and Zha-Bei district) and 2 suburban ones (Feng-Xian district and Bao-Shan district). Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Follow-up of children ages 5-10 from the CCHH study (2011-2012) in Shanghai, China (n=419). China, Children, Homes, Health (CCHH) project. Recruitment: 2011-2012; Follow-up: 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via morning urine samples.	Logistic Regression. Confounders adjusted for: gender, age, BMI, breastfeeding time, family smoking exposure, residence area, maternal education, annual household income, history of parental asthma, wall materials in children's bedrooms and floor materials in children's bedrooms..	Lowest exposure concentration for a significant adverse health outcome response: >205.7 ug/g. OR (95% CI) for Q4 vs. Q1: 2.27 (1.06 - 4.88). Significant positive associations were reported for Q4 MnBP values and the prevalence odds of wheeze..	Shi et. al 2018 4829218 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Rhinitis	Health Effect: Lung/Respiratory-Asthma and allergic indicators (wheezing, sneezing, rhinitis)-Non-cancer. Outcome measure: Questionnaire	General public. Preschool (3-5), Middle childhood (6-11). China; 6 administrative districts in Shanghai – 4 urban districts (Yang-Pu district, Hong-kou district, Jing-An district, and Zha-Bei district) and 2 suburban ones (Feng-Xian district and Bao-Shan district). Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Follow-up of children ages 5-10 from the CCHH study (2011-2012) in Shanghai, China (n=419). China, Children, Homes, Health (CCHH) project. Recruitment: 2011-2012; Follow-up: 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via morning urine samples.	Logistic Regression. Confounders adjusted for: gender, age, BMI, breastfeeding time, family smoking exposure, residence area, maternal education, annual household income, history of parental asthma, wall materials in children's bedrooms and floor materials in children's bedrooms..	Lowest exposure concentration for a significant adverse health outcome response: >205.7 ug/g. OR (95% CI) for Q4 vs. Q1: 2.14 (1.02 - 4.46)P-trend = 0.04. Significant positive associations were reported for Q4 MnBP values and the prevalence odds of rhinitis..	Shi et. al 2018 4829218 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Eczema	Health Effect: Skin/Connective Tissue-Eczema-Non-cancer. Outcome measure: Questionnaire	General public. Preschool (3-5), Middle childhood (6-11). China; 6 administrative districts in Shanghai – 4 urban districts (Yang-Pu district, Hong-kou district, Jing-An district, and Zha-Bei district) and 2 suburban ones (Feng-Xian district and Bao-Shan district). Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Follow-up of children ages 5-10 from the CCHH study (2011-2012) in Shanghai, China (n=419). China, Children, Homes, Health (CCHH) project. Recruitment: 2011-2012; Follow-up: 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via morning urine samples.	Logistic Regression. Confounders adjusted for: gender, age, BMI, breastfeeding time, family smoking exposure, residence area, maternal education, annual household income, history of parental asthma, wall materials in children's bedrooms and floor materials in children's bedrooms..	Lowest exposure concentration for a significant adverse health outcome response: >205.7 ug/g. OR (95% CI) for Q4 vs. Q1: 2.98 (1.19 - 7.50)P-trend = 0.01. Significant positive associations were reported for Q4 MnBP values and the prevalence odds of eczema..	Shi et. al 2018 4829218 Low

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Diethylhexyl Phthalate

Metabolite: Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-3-carboxypentyl)phthalate (MECPP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Eczema	Health Effect: Skin/Connective Tissue-Eczema-Non-cancer. Outcome measure: Questionnaire	General public. Preschool (3-5), Middle childhood (6-11). China; 6 administrative districts in Shanghai – 4 urban districts (Yang-Pu district, Hong-kou district, Jing-An district, and Zha-Bei district) and 2 suburban ones (Feng-Xian district and Bao-Shan district). Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Follow-up of children ages 5-10 from the CCHH study (2011-2012) in Shanghai, China (n=419). China, Children, Homes, Health (CCHH) project. Recruitment: 2011-2012; Follow-up: 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via morning urine samples.	Logistic Regression. Confounders adjusted for: gender, age, BMI, breastfeeding time, family smoking exposure, residence area, maternal education, annual household income, history of parental asthma, wall materials in children's bedrooms and floor materials in children's bedrooms..	Lowest exposure concentration for a significant adverse health outcome response: 41.1-69.5 ug/g. OR (95% CI) for Q3 vs. Q1: 3.89 (1.38 - 10.98)OR (95% CI) for Q4 vs. Q1: 3.10 (1.10 - 8.74)P-trend = 0.02. Significant positive associations were reported for Q3 and Q4 MEHHP values and the prevalence odds of eczema..	Shi et. al 2018 4829218 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Eczema	Health Effect: Skin/Connective Tissue-Eczema-Non-cancer. Outcome measure: Questionnaire	General public. Preschool (3-5), Middle childhood (6-11). China; 6 administrative districts in Shanghai – 4 urban districts (Yang-Pu district, Hong-kou district, Jing-An district, and Zha-Bei district) and 2 suburban ones (Feng-Xian district and Bao-Shan district). Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Follow-up of children ages 5-10 from the CCHH study (2011-2012) in Shanghai, China (n=419). China, Children, Homes, Health (CCHH) project. Recruitment: 2011-2012; Follow-up: 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via morning urine samples.	Logistic Regression. Confounders adjusted for: gender, age, BMI, breastfeeding time, family smoking exposure, residence area, maternal education, annual household income, history of parental asthma, wall materials in children's bedrooms and floor materials in children's bedrooms..	Lowest exposure concentration for a significant adverse health outcome response: >38.4 ug/g. OR (95% CI) for Q4 vs. Q1: 2.63 (1.02 - 6.80)P-trend = 0.04. Significant positive associations were reported for Q4 MEOHP values and the prevalence odds of eczema..	Shi et. al 2018 4829218 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Rhinitis	Health Effect: Lung/Respiratory-Asthma and allergic indicators (wheezing, sneezing, rhinitis)-Non-cancer. Outcome measure: Questionnaire	General public. Preschool (3-5), Middle childhood (6-11). China; 6 administrative districts in Shanghai – 4 urban districts (Yang-Pu district, Hong-kou district, Jing-An district, and Zha-Bei district) and 2 suburban ones (Feng-Xian district and Bao-Shan district). Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Follow-up of children ages 5-10 from the CCHH study (2011-2012) in Shanghai, China (n=419). China, Children, Homes, Health (CCHH) project. Recruitment: 2011-2012; Follow-up: 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via morning urine samples.	Logistic Regression. Confounders adjusted for: gender, age, BMI, breastfeeding time, family smoking exposure, residence area, maternal education, annual household income, history of parental asthma, wall materials in children's bedrooms and floor materials in children's bedrooms..	Lowest exposure concentration for a significant adverse health outcome response: >1.3 ug/g. OR (95% CI) for Q4 vs. Q1: 2.46 (1.17 - 5.14). Significant positive associations were reported for Q4 MBzP values and the prevalence odds of rhinitis..	Shi et. al 2018 4829218 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Equal to or >2 concomitant symptoms	Health Effect: Lung/Respiratory-Asthma and allergic indicators (wheezing, sneezing, rhinitis)-Non-cancer-Skin/Connective Tissue-Eczema-Non-cancer. Outcome measure: Questionnaire	General public. Preschool (3-5), Middle childhood (6-11). China; 6 administrative districts in Shanghai – 4 urban districts (Yang-Pu district, Hong-kou district, Jing-An district, and Zha-Bei district) and 2 suburban ones (Feng-Xian district and Bao-Shan district). Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Follow-up of children ages 5-10 from the CCHH study (2011-2012) in Shanghai, China (n=419). China, Children, Homes, Health (CCHH) project. Recruitment: 2011-2012; Follow-up: 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via morning urine samples.	Logistic Regression. Confounders adjusted for: gender, age, BMI, breastfeeding time, family smoking exposure, residence area, maternal education, annual household income, history of parental asthma, wall materials in children's bedrooms and floor materials in children's bedrooms..	Lowest exposure concentration for a significant adverse health outcome response: >144.0 ug/g. OR (95% CI) for Q4 vs. Q1, p <0.05. Significant positive associations were reported for Q4 MiBP values and the prevalence two or more concomitant symptoms of allergies and/or asthma..	Shi et. al 2018 4829218 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Equal to or >2 concomitant symptoms	Health Effect: Lung/Respiratory-Asthma and allergic indicators (wheezing, sneezing, rhinitis)-Non-cancer-Skin/Connective Tissue-Eczema-Non-cancer. Outcome measure: Questionnaire	General public. Preschool (3-5), Middle childhood (6-11). China; 6 administrative districts in Shanghai – 4 urban districts (Yang-Pu district, Hong-kou district, Jing-An district, and Zha-Bei district) and 2 suburban ones (Feng-Xian district and Bao-Shan district). Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Follow-up of children ages 5-10 from the CCHH study (2011-2012) in Shanghai, China (n=419). China, Children, Homes, Health (CCHH) project. Recruitment: 2011-2012; Follow-up: 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Acute (less than 24 hours) Exposure measured via morning urine samples.	Logistic Regression. Confounders adjusted for: gender, age, BMI, breastfeeding time, family smoking exposure, residence area, maternal education, annual household income, history of parental asthma, wall materials in children's bedrooms and floor materials in children's bedrooms..	Lowest exposure concentration for a significant adverse health outcome response: >205.7 ug/g. OR (95% CI) for Q4 vs. Q1, p <0.001. Significant positive associations were reported for Q4 MnBP values and the prevalence two or more concomitant symptoms of allergies and/or asthma..	Shi et. al 2018 4829218 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Equal to or >2 concomitant symptoms	Health Effect: Lung/Respiratory-Asthma and allergic indicators (wheezing, sneezing, rhinitis)-Non-cancer-Skin/Connective Tissue-Eczema-Non-cancer. Outcome measure: Questionnaire	General public. Preschool (3-5), Middle childhood (6-11). China; 6 administrative districts in Shanghai – 4 urban districts (Yang-Pu district, Hong-kou district, Jing-An district, and Zha-Bei district) and 2 suburban ones (Feng-Xian district and Bao-Shan district). Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Follow-up of children ages 5-10 from the CCHH study (2011-2012) in Shanghai, China (n=419). China, Children, Homes, Health (CCHH) project. Recruitment: 2011-2012; Follow-up: 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via morning urine samples.	Logistic Regression. Confounders adjusted for: gender, age, BMI, breastfeeding time, family smoking exposure, residence area, maternal education, annual household income, history of parental asthma, wall materials in children's bedrooms and floor materials in children's bedrooms..	Lowest exposure concentration for a significant adverse health outcome response: >69.5 ug/g. OR (95% CI) for Q4 vs. Q1, p <0.05. Significant positive associations were reported for Q4 MEHHP values and the prevalence two or more concomitant symptoms of allergies and/or asthma..	Shi et. al 2018 4829218 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Equal to or >2 concomitant symptoms	Health Effect: Lung/Respiratory-Asthma and allergic indicators (wheezing, sneezing, rhinitis)-Non-cancer-Skin/Connective Tissue-Eczema-Non-cancer. Outcome measure: Questionnaire	General public. Preschool (3-5), Middle childhood (6-11). China; 6 administrative districts in Shanghai – 4 urban districts (Yang-Pu district, Hong-kou district, Jing-An district, and Zha-Bei district) and 2 suburban ones (Feng-Xian district and Bao-Shan district). Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Follow-up of children ages 5-10 from the CCHH study (2011-2012) in Shanghai, China (n=419). China, Children, Homes, Health (CCHH) project. Recruitment: 2011-2012; Follow-up: 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via morning urine samples.	Logistic Regression. Confounders adjusted for: gender, age, BMI, breastfeeding time, family smoking exposure, residence area, maternal education, annual household income, history of parental asthma, wall materials in children's bedrooms and floor materials in children's bedrooms..	Lowest exposure concentration for a significant adverse health outcome response: >38.4 ug/g. OR (95% CI) for Q4 vs. Q1, p <0.05. Significant positive associations were reported for Q4 MEOHP values and the prevalence two or more concomitant symptoms of allergies and/or asthma..	Shi et. al 2018 4829218 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Equal to or >2 concomitant symptoms	Health Effect: Lung/Respiratory-Asthma and allergic indicators (wheezing, sneezing, rhinitis)-Non-cancer-Skin/Connective Tissue-Eczema-Non-cancer. Outcome measure: Questionnaire	General public. Preschool (3-5), Middle childhood (6-11). China; 6 administrative districts in Shanghai – 4 urban districts (Yang-Pu district, Hong-kou district, Jing-An district, and Zha-Bei district) and 2 suburban ones (Feng-Xian district and Bao-Shan district). Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Follow-up of children ages 5-10 from the CCHH study (2011-2012) in Shanghai, China (n=419). China, Children, Homes, Health (CCHH) project. Recruitment: 2011-2012; Follow-up: 2013-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Acute (less than 24 hours) Exposure measured via morning urine samples.	Logistic Regression. Confounders adjusted for: gender, age, BMI, breastfeeding time, family smoking exposure, residence area, maternal education, annual household income, history of parental asthma, wall materials in children's bedrooms and floor materials in children's bedrooms..	Lowest exposure concentration for a significant adverse health outcome response: >1.3 ug/g. OR (95% CI) for Q4 vs. Q1, p <0.01. Significant positive associations were reported for Q4 MBzP values and the prevalence two or more concomitant symptoms of allergies and/or asthma..	Shi et. al 2018 4829218 Low

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
eGFR calculated from serum creatinine; UPCR calculated from urinary protein and creatinine	Health Effect: Renal/Kidney-Estimated glomerular filtration rate (eGFR), urinary protein to creatinine ratio (UPCR),-Non-cancer. Outcome measure: Estimated glomerular filtration rate (eGFR) was calculated using the modified equation formulated by Schwartz and colleagues, and urinary protein to creatinine ratio (UPCR) was measured from the first morning urine samples.	General public. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17). United States. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Chronic Kidney Disease in Children (CKiD) Study: (2005-2008 and 2009-2014), United States, n = 538 children ages 1-17 (boys = 344, girls = 194) years of age). National Health And Nutrition Examination Survey (NHANES). 2005-2008 and 2009-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured in the years of 2007-2008.	Linear Regression. Confounders adjusted for: sex, age at visit, race, ethnicity, glomerular disease, birth weight, low birth weight, prematurity, BMI z-score, use of ACE-I/ARB, SBP and DBP z-scores, urinary creatinine, and urinary cotinine.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) for eGFR:MECPP = 2.35 (1.44, 3.26), p<0.001MEHHP = 2.40 (1.15, 3.64), p<0.001MEOHP = 1.85 (0.78, 2.91), p=0.001MCMHP = -2.30 (-3.74, -0.85), p=0.002ΣDEHP = not significantRegression coefficient (95% CI) for UPCR:MECPP = -10.20 (-15.80, -4.95), p<0.001MEHHP = -13.23 (-20.34, -5.38), p=0.001MEOHP = -9.23 (-15.04, -2.91), p=0.005MCMHP = not significantΣDEHP = not significant. Three DEHP metabolites were found to have significant positive associations with eGFR (MECPP = 2.35 (1.44, 3.26), MEHHP = 2.40 (1.15, 3.64), MEOHP = 1.85 (0.78, 2.91)) and one metabolite reported a significant negative associate with eGFR (MCMHP = -2.30 (-3.74, -0.85)). Additionally, three DEHP metabolites reported significant negative associations with the urinary protein to creatinine ratio (MECPP = -10.20 (-15.80, -4.95), MEHHP = -13.23 (-20.34, -5.38), and MEOHP = -9.23 (-15.04, -2.91))..	Malits et. al 2018 4829246 Medium

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Inattention (Omission errors on CPT)	Health Effect: Neurological/Behavioral-Inattention–omission errors on continuous performance test (CPT)-Non-cancer. Outcome measure: Continuous performance test (CPT), Korean version	General public. Middle childhood (6-11), Teens (12-17). South Korea. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 249 children and adolescents with ADHD and 98 healthy controls between 6 and 17 years of age. August 2010 - February 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring at the outpatient clinic.	Linear Regression.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Within the ADHD group: 1.) Interaction term (methylation x log MEHHP analysis results (Table 2): The methylation groups of CpG26 (methylation x log MEHHP β [95% CI]: 25.95 [10.37, 41.53], p = 0.001) and CpG28 (methylation x log MEHHP β [95% CI]: 23.01 [9.18, 36.84], p = 0.001) showed a significant interaction with MEHHP levels on omission errors (inattention) (Table 2). 2.) Correlation between CPT omission (inattention) variables and MEHHP levels in methylated and unmethylated groups of CpG analysis results for CpG26 and CpG28 (Table 4): MEHHP levels and Inattention-Omission errors CpG26: Methylated group: β [95% CI]: 14.60 [28.14, 54.15], p<0.001; Unmethylated group: β [95% CI]: -11.35 [-25.28, 2.58], p = 0.107. MEHHP levels and Inattention-Omission errors CpG28: Methylated group: β [95% CI]: 17.03 [8.37, 25.70], p<0.001; Unmethylated group: β [95% CI]: -5.98 [-16.76, 4.80], p = 0.272.. Within the ADHD group, the methylation groups of CpG26 showed a significant interaction (methylation x log MEHHP interaction term) with MEHHP levels on omission errors (inattention) (Table 2). There was a significant positive correlation between ADHD group omission errors (inattention) and MEHHP levels within the methylated groups of CpG26 and CpG28, but not in the unmethylated groups (Table 4). There was also a significant positive correlation between ADHD group response time variability (sustained attention) and MEHHP levels in the methylated groups of CpG26, but not in the unmethylated groups (Table 4).There were no reported significant interactions between the methylation status and phthalate metabolite levels on any CPT variable in the HC group. There were also no CpG sites that showed significant main effects on CPT variables in the ADHD and HC groups. Specific results for MEOHP were not presented..	Kim et. al 2018 4829342 Low

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Inattention (Omission errors on CPT)	Health Effect: Neurological/Behavioral-Sustained attention–response time variability on continuous performance test (CPT)-Non-cancer. Outcome measure: Continuous performance test (CPT), Korean version	General public. Middle childhood (6-11), Teens (12-17). South Korea. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 249 children and adolescents with ADHD and 98 healthy controls between 6 and 17 years of age. August 2010 - February 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring at the outpatient clinic.	Linear Regression.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Within the ADHD group: 1.) Interaction term (methylation x log MEHHP analysis results (Table 3): The methylation groups of CpG26 (methylation x log MEHHP β [95% CI]: 25.95 [10.37, 41.53], p = 0.001) had a significant interaction with MEHHP levels on response time variability (sustained attention) (Table 3). 2.) Correlation between CPT response time variability (sustained attention) variables and MEHHP levels in methylated and unmethylated groups of CpG analysis results for CpG26 (Table 4): MEHHP levels and Sustained attention-Response time variability errors CpG26: Methylated group: β [95% CI]: 9.60 [2.82, 16.37], p = 0.006; Unmethylated group: β [95% CI]: -14.17 [-27.66, -0.68], p = 0.40 (Table 4).. Within the ADHD group, the methylation group of CpG26 had a significant interaction effect with MEHHP levels on response time variability (sustained attention) (Table 3) and there was a significant positive correlation between ADHD group response time variability (sustained attention) and MEHHP levels in the methylated groups of CpG26, but not in the unmethylated groups (Table 4).There were no reported significant interactions between the methylation status and phthalate metabolite levels on any CPT variable in the HC group. There were also no CpG sites that showed significant main effects on CPT variables in the ADHD and HC groups. Specific results for MEOHP were not presented..	Kim et. al 2018 4829342 Low

Human Health Hazard Epidemology Extraction

Diethylhexyl Phthalate DEHP metabolites [Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP)]

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Anoclitoral distance	Health Effect: Reproductive/Developmental-Anoclitoris distance (ACD), anofourchette distance (AFD), anopenile distance (APD), anoscrotal distance (ASD), second to fourth finger (2D:4D) digit ratio-Non-cancer. Outcome measure: Direct measurement from study research personnel	General public, Pregnant people. Infant (0-1), Adults (18+). Canada; Vancouver, Edmonton, Winnipeg, Sudbury, Toronto, Hamilton, Kingston, Ottawa, Montreal, Halifax. Female, Male. Cohort (Prospective). PESS: Lifestage , Other Chemical and Non-chemical stressors (ex. exposure to other substances that affect same organ as test chemical). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Canadian women from Maternal-Infant Research on Environmental Chemicals (MIREC) cohort recruited during pregnancy and enrolled in follow up study (MIREC-ID) (analysis sample included 396 mother-child pairs). Maternal-Infant Research on Environmental Chemicals (MIREC) study. Recruitment: 2008-2011; Follow-up: 6 months after birth.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Maternal exposure measured during first trimester of pregnancy.	Linear Regression. Confounders adjusted for: Specific gravity, education, mother born in Canada, gestational age, maternal age, weight-for-length z score.	Lowest exposure concentration for a significant adverse health outcome response: continuous Geometric mean (95% CI) maternal MBzP = 5.15 (4.52-5.86) ug/L. Regression coefficient (95% CI) for per 1 ln-unit MBzP = -1.2401 (-1.9080, -0.5723). The anoclitoral distance (ACD) was significantly negatively associated with MBzP in females. Non-significant, inverse associations were reported for most other measures of AGD and 2D:4D ratio..	Arbuckle et. al 2018 4829228 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
2D:4D digit ratio	Health Effect: Reproductive/Developmental-Anoclitoris distance (ACD), anofourchette distance (AFD), anopenile distance (APD), anoscrotal distance (ASD), second to fourth finger (2D:4D) digit ratio-Non-cancer. Outcome measure: Direct measurement from study research personnel	General public, Pregnant people. Infant (0-1), Adults (18+). Canada; Vancouver, Edmonton, Winnipeg, Sudbury, Toronto, Hamilton, Kingston, Ottawa, Montreal, Halifax. Female, Male. Cohort (Prospective). PESS: Lifestage , Other Chemical and Non-chemical stressors (ex. exposure to other substances that affect same organ as test chemical). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Canadian women from Maternal-Infant Research on Environmental Chemicals (MIREC) cohort recruited during pregnancy and enrolled in follow up study (MIREC-ID) (analysis sample included 396 mother-child pairs). Maternal-Infant Research on Environmental Chemicals (MIREC) study. Recruitment: 2008 - 2011; Follow-up: 6 months after birth.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Maternal exposure measured during first trimester of pregnancy.	Linear Regression. Confounders adjusted for: Specific gravity, site, mother born in Canada, infant age.	Lowest exposure concentration for a significant adverse health outcome response: continuous Geometric mean (95% CI) maternal MnBP = 10.66 (9.43-12.05) ug/L. Regression coefficient (95% CI) for 2D:4D ratio (right hand) in females per 1 ln-unit increase MnBP = 0.0122 (0.0018, 0.0227). The second to fourth digit ratio in the right hand had a slight but significant positive association with prenatal MnBP. Results were positive, non-significant in the left hand and close to null in male infants..	Arbuckle et. al 2018 4829228 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Anopenile distance	Health Effect: Reproductive/Developmental-Anoclitoris distance (ACD), anofourchette distance (AFD), anopenile distance (APD), anoscrotal distance (ASD), second to fourth finger (2D:4D) digit ratio-Non-cancer. Outcome measure: Direct measurement from study research personnel	General public, Pregnant people. Infant (0-1), Adults (18+). Canada; Vancouver, Edmonton, Winnipeg, Sudbury, Toronto, Hamilton, Kingston, Ottawa, Montreal, Halifax. Female, Male. Cohort (Prospective). PESS: Lifestage , Other Chemical and Non-chemical stressors (ex. exposure to other substances that affect same organ as test chemical). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months). Canadian women from Maternal-Infant Research on Environmental Chemicals (MIREC) cohort recruited during pregnancy and enrolled in follow up study (MIREC-ID) (analysis sample included 396 mother-child pairs). Maternal-Infant Research on Environmental Chemicals (MIREC) study. Recruitment: 2008 - 2011; Follow-up: 6 months after birth.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Maternal exposure measured during first trimester of pregnancy.	Linear Regression. Confounders adjusted for: Specific gravity, site, smoking status, BMI, maternal race, gestational age, weight-for-length z score.	Lowest exposure concentration for a significant adverse health outcome response: continuous Geometric mean (95% CI) maternal MnBP = 10.66 (9.43-12.05) ug/L. Regression coefficient (95% CI) for per 1 ln-unit increase MnBP = 1.1689 (0.0207, 2.317). The anopenile distance (APD) was significantly positively associated with MnBP in males. Non-significant positive associations were reported for all AGD measures in girls, and a non-significant negative association was reported for anoscrotal distance..	Arbuckle et. al 2018 4829228 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Total cholesterol	Health Effect: Cardiovascular-Systolic blood pressure, diastolic blood pressure, total cholesterol, HDL-C, LDL-C-Non-cancer. Outcome measure: Standard enzymatic methods	General public, Pregnant people. Preschool (3-5), Middle childhood (6-11), Adults (18+). Greece; Heraklion, Crete. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Mother-child pairs from the Rhea study who became pregnant within one year from February 2007 (Enrolled n=260 mothers and 500 children; Used in analysis n=202). Rhea Study. Within one year beginning February 2007.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Acute (less than 24 hours) Exposure measured concurrently with outcome.	Linear Regression. Confounders adjusted for: child sex, exact age at examination, maternal characteristics (age at delivery, parity, education, pre-pregnancy BMI, smoking in pregnancy).	Lowest exposure concentration for a significant adverse health outcome response: Continuous [geometric mean (SD) child sum DEHP = 0.3 (2.1) nmol/g creatinine]. Beta value (95% CI) for total cholesterol per 10-fold increase child sum DEHP:-in girls = 7.1 (0.5, 14.1). Significant positive association between 10-fold increase in child sum DEHP and total cholesterol in girls. Findings were positive non-significant for all participants and negative non-significant for boys. p for sex interaction = 0.075. No other significant findings for child sum DEHP and other cardiovascular outcomes..	Vafeiadi et. al 2018 5041285 Medium
Diastolic blood pressure z-score	Health Effect: Cardiovascular-Systolic blood pressure, diastolic blood pressure, total cholesterol, HDL-C, LDL-C-Non-cancer. Outcome measure: Measured using an automatic oscillometric device	General public, Pregnant people. Preschool (3-5), Middle childhood (6-11), Adults (18+). Greece; Heraklion, Crete. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Mother-child pairs from the Rhea study who became pregnant within one year from February 2007 (Enrolled n=260 mothers and 500 children; Used in analysis n=202). Rhea Study. Within one year beginning February 2007.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Acute (less than 24 hours) Exposure measured during pregnancy.	Linear Regression. Confounders adjusted for: child sex, exact age at examination, maternal characteristics (age at delivery, parity, education, pre-pregnancy BMI, smoking in pregnancy).	Lowest exposure concentration for a significant adverse health outcome response: Continuous [geometric mean (SD) prenatal MiBP = 33.5 (3.1) ug/g creatinine]. Beta value (95% CI) for DBP z-score per 10-fold increase prenatal MiBP:-in all participants = -0.2 (-0.37, -0.03)-in boys = -0.26 (-0.48, -0.04). Significant negative association between 10-fold increase in prenatal MiBP and diastolic DBP z-score. Negative, non-significant for girls. p-sex interaction=0.266. No significant findings for prenatal MiBP and other cardiovascular outcomes..	Vafeiadi et. al 2018 5041285 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Total cholesterol	Health Effect: Cardiovascular-Systolic blood pressure, diastolic blood pressure, total cholesterol, HDL-C, LDL-C-Non-cancer. Outcome measure: Standard enzymatic methods	General public, Pregnant people. Preschool (3-5), Middle childhood (6-11), Adults (18+). Greece; Heraklion, Crete. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Mother-child pairs from the Rhea study who became pregnant within one year from February 2007 (Enrolled n=260 mothers and 500 children; Used in analysis n=202). Rhea Study. Within one year beginning February 2007.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Acute (less than 24 hours) Exposure measured concurrently with outcome.	Linear Regression. Confounders adjusted for: child sex, exact age at examination, maternal characteristics (age at delivery, parity, education, pre-pregnancy BMI, smoking in pregnancy).	Lowest exposure concentration for a significant adverse health outcome response: Continuous [geometric mean (SD) child MiBP = 41.1 (3.3) ug/g creatinine]. Beta value (95% CI) for total cholesterol per 10-fold increase child MiBP:-in all participants = 4.4 (0.2, 8.7)-in girls = 7.6 (1.1, 14.6). Significant positive association between 10-fold increase in child MiBP and total cholesterol. Positive, non-significant for girls. p-sex interaction=0.248. No significant findings for other cardiovascular outcomes and child MiBP..	Vafeiadi et. al 2018 5041285 Medium
Weight-for-height ratio	Health Effect: Reproductive/Developmental-Body mass index (BMI), BMI z-score, overweight, obesity, waist circumference, sum of skinfolds, weight to height ratio-Non-cancer-Nutritional/Metabolic-Body mass index (BMI), BMI z-score, overweight, obesity, waist circumference, sum of skinfolds, weight to height ratio-Non-cancer. Outcome measure: Direct measurement	General public, Pregnant people. Preschool (3-5), Middle childhood (6-11), Adults (18+). Greece; Heraklion, Crete. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Mother-child pairs from the Rhea study who became pregnant within one year from February 2007 (Enrolled n=260 mothers and 500 children; Used in analysis n=202). Rhea Study. Within one year beginning February 2007.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Acute (less than 24 hours) Exposure measured during pregnancy.	Linear Regression. Confounders adjusted for: child sex, exact age at examination, maternal characteristics (age at delivery, parity, education, pre-pregnancy BMI, smoking in pregnancy).	Lowest exposure concentration for a significant adverse health outcome response: Continuous [geometric mean (SD) prenatal MnBP = 37.1 (2.4) ug/g creatinine]. Beta value (95% CI) for weight-for-height ratio per 10-fold increase prenatal MnBP:-in all participants = 0.1 (0.05, 0.14)-in boys = 0.19 (0.11, 0.27). Significant positive association between 10-fold increase in prenatal MnBP and weight-for-height ratio. Positive, non-significant for girls. p-sex interaction < 0.001 No significant findings for other metabolic outcomes and prenatal MnBP..	Vafeiadi et. al 2018 5041285 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Diastolic blood pressure z-score	Health Effect: Cardiovascular-Systolic blood pressure, diastolic blood pressure, total cholesterol, HDL-C, LDL-C-Non-cancer. Outcome measure: Measured using an automatic oscillometric device	General public, Pregnant people. Preschool (3-5), Middle childhood (6-11), Adults (18+). Greece; Heraklion, Crete. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Mother-child pairs from the Rhea study who became pregnant within one year from February 2007 (Enrolled n=260 mothers and 500 children; Used in analysis n=202). Rhea Study. Within one year beginning February 2007.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Acute (less than 24 hours) Exposure measured concurrently with outcome.	Linear Regression. Confounders adjusted for: child sex, exact age at examination, maternal characteristics (age at delivery, parity, education, pre-pregnancy BMI, smoking in pregnancy).	Lowest exposure concentration for a significant adverse health outcome response: Continuous [geometric mean (SD) child MBzP = 7.4 (3.2) ug/g creatinine]. Beta value (95% CI) for DBP z-score per 10-fold increase child MBzP:-in all participants = -0.11 (-0.21, -0.01). Significant negative association between 10-fold increase in child MBzP and DBP z-score. No significant findings when stratified by sex. No significant findings for other cardiovascular outcomes and child MBzP..	Vafeiadi et. al 2018 5041285 Medium
Diastolic blood pressure z-score	Health Effect: Cardiovascular-Systolic blood pressure, diastolic blood pressure, total cholesterol, HDL-C, LDL-C-Non-cancer. Outcome measure: Measured using an automatic oscillometric device	General public, Pregnant people. Preschool (3-5), Middle childhood (6-11), Adults (18+). Greece; Heraklion, Crete. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Mother-child pairs from the Rhea study who became pregnant within one year from February 2007 (Enrolled n=260 mothers and 500 children; Used in analysis n=202). Rhea Study. Within one year beginning February 2007.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Acute (less than 24 hours) Exposure measured concurrently with outcome.	Linear Regression. Confounders adjusted for: child sex, exact age at examination, maternal characteristics (age at delivery, parity, education, pre-pregnancy BMI, smoking in pregnancy).	Lowest exposure concentration for a significant adverse health outcome response: Continuous [geometric mean (SD) child MnBP = 21.7 (4.6) ug/g creatinine]. Beta value (95% CI) for DBP z-score per 10-fold increase child MnBP:-in all participants = -0.13 (-0.23, -0.04)-in boys = -0.16 (-0.29. -0.02). Significant negative association between 10-fold increase in child MnBP and DBP z-score. Negative, non-significant for girls. p-sex interaction=0.977. No significant findings for other cardiovascular outcomes and child MnBP..	Vafeiadi et. al 2018 5041285 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
BMI z-score, weight-for-height ratio, sum of skinfolds, waist circumference	Health Effect: Reproductive/Developmental-Body mass index (BMI), BMI z-score, overweight, obesity, waist circumference, sum of skinfolds, weight to height ratio-Non-cancer-Nutritional/Metabolic-Body mass index (BMI), BMI z-score, overweight, obesity, waist circumference, sum of skinfolds, weight to height ratio-Non-cancer. Outcome measure: Direct measurement	General public, Pregnant people. Preschool (3-5), Middle childhood (6-11), Adults (18+). Greece; Heraklion, Crete. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Mother-child pairs from the Rhea study who became pregnant within one year from February 2007 (Enrolled n=260 mothers and 500 children; Used in analysis n=202). Rhea Study. Within one year beginning February 2007.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Acute (less than 24 hours) Exposure measured concurrently with outcome.	Linear Regression. Confounders adjusted for: child sex, exact age at examination, maternal characteristics (age at delivery, parity, education, pre-pregnancy BMI, smoking in pregnancy).	Lowest exposure concentration for a significant adverse health outcome response: Continuous [geometric mean (SD) child MnBP = 21.7 (4.6) ug/g creatinine]. Beta value (95% CI) for BMI z-score per 10-fold increase child MnBP:-in girls = 0.39 (0.11, 0.66), p-sex interaction = 0.010Beta value (95% CI) for waist circumference per 10-fold increase child MnBP:-in girls = 1.85 (0.18, 3.52), p-sex interaction = 0.011Beta value (95% CI) for sum of skinfolds per 10-fold increase child MnBP:-in girls = 5.04 (0.77, 9.3), p-sex interaction = 0.727Beta value (95% CI) for waist-to-height ratio per 10-fold increase child MnBP:-in girls = 0.02 (0.01, 0.03), p-sex interaction = 0.001. Significant positive association between 10-fold increase in child MnBP and all metabolic outcomes in girls. Results were inconsistent for all outcomes in all participants and boys only, and significant sex interactions were observed for every outcome except sum of skinfolds..	Vafeiadi et. al 2018 5041285 Medium
BMI z-score, weight-for-height ratio, sum of skinfolds, waist circumference	Health Effect: Reproductive/Developmental-Body mass index (BMI), BMI z-score, overweight, obesity, waist circumference, sum of skinfolds, weight to height ratio-Non-cancer-Nutritional/Metabolic-Body mass index (BMI), BMI z-score, overweight, obesity, waist circumference, sum of skinfolds, weight to height ratio-Non-cancer. Outcome measure: Direct measurement	General public, Pregnant people. Preschool (3-5), Middle childhood (6-11), Adults (18+). Greece; Heraklion, Crete. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Mother-child pairs from the Rhea study who became pregnant within one year from February 2007 (Enrolled n=260 mothers and 500 children; Used in analysis n=202). Rhea Study. Within one year beginning February 2007.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Acute (less than 24 hours) Exposure measured concurrently with outcome.	Linear Regression. Confounders adjusted for: child sex, exact age at examination, maternal characteristics (age at delivery, parity, education, pre-pregnancy BMI, smoking in pregnancy).	Lowest exposure concentration for a significant adverse health outcome response: Continuous [geometric mean (SD) child MiBP = 41.1 (3.3) ug/g creatinine]. Beta value (95% CI) for BMI z-score per 10-fold increase child MiBP:-in boys = -0.31 (-0.6, -0.02)-in girls = 0.74 (0.37, 1.1)p-sex interaction = 0.000Beta value (95% CI) for waist circumference per 10-fold increase child MiBP:-in boys = -2.04 (-4, -0.09)-in girls = 3.17 (0.92, 5.42)p-sex interaction = 0.000Beta value (95% CI) for sum of skinfolds per 10-fold increase child MiBP:-in girls = 10.6 (4.96, 16.24), p-sex interaction = 0.227Beta value (95% CI) for waist-to-height ratio per 10-fold increase child MiBP:-in girls = 0.04 (0.02, 0.05), p-sex interaction = 0.000. Significant positive association between 10-fold increase in child MiBP and all metabolic outcomes in girls, while BMI z-score and waist circumference were inverse and significant for boys. Results were inconsistent for all outcomes in all participants combined, and significant sex interactions were observed for every outcome except sum of skinfolds..	Vafeiadi et. al 2018 5041285 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
BMI z-score, weight-for-height ratio, sum of skinfolds, waist circumference	Health Effect: Reproductive/Developmental-Body mass index (BMI), BMI z-score, overweight, obesity, waist circumference, sum of skinfolds, weight to height ratio-Non-cancer-Nutritional/Metabolic-Body mass index (BMI), BMI z-score, overweight, obesity, waist circumference, sum of skinfolds, weight to height ratio-Non-cancer. Outcome measure: Direct measurement	General public, Pregnant people. Preschool (3-5), Middle childhood (6-11), Adults (18+). Greece; Heraklion, Crete. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Mother-child pairs from the Rhea study who became pregnant within one year from February 2007 (Enrolled n=260 mothers and 500 children; Used in analysis n=202). Rhea Study. Within one year beginning February 2007.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Acute (less than 24 hours) Exposure measured concurrently with outcome.	Linear Regression. Confounders adjusted for: child sex, exact age at examination, maternal characteristics (age at delivery, parity, education, pre-pregnancy BMI, smoking in pregnancy).	Lowest exposure concentration for a significant adverse health outcome response: Continuous [geometric mean (SD) child MBzP = 7.4 (3.2) ug/g creatinine]. Beta value (95% CI) for BMI z-score per 10-fold increase child MBzP:-in girls = 0.42 (0.14, 0.7), p-sex interaction = 0.015Beta value (95% CI) for waist circumference per 10-fold increase child MBzP:-in girls = 2.6 (0.91, 4.3), p-sex interaction = 0.013Beta value (95% CI) for sum of skinfolds per 10-fold increase child MBzP:-in all participants = 7.43 (1.95, 12.9)-in girls = 8.37 (4.03, 12.72)-p-sex interaction = 0.727Beta value (95% CI) for waist-to-height ratio per 10-fold increase child MBzP:-in girls = 0.03 (0.02, 0.04), p-sex interaction = 0.002. Significant positive association between 10-fold increase in child MBzP and all metabolic outcomes in girls. Results were inconsistent for all outcomes in all participants and boys only, except for a significant positive association for sum of skinfolds in all participants. Significant sex interactions were observed for every outcome except sum of skinfolds..	Vafeiadi et. al 2018 5041285 Medium
BMI z-score, weight-for-height ratio, sum of skinfolds, waist circumference	Health Effect: Reproductive/Developmental-Body mass index (BMI), BMI z-score, overweight, obesity, waist circumference, sum of skinfolds, weight to height ratio-Non-cancer-Nutritional/Metabolic-Body mass index (BMI), BMI z-score, overweight, obesity, waist circumference, sum of skinfolds, weight to height ratio-Non-cancer. Outcome measure: Direct measurement	General public, Pregnant people. Preschool (3-5), Middle childhood (6-11), Adults (18+). Greece; Heraklion, Crete. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Mother-child pairs from the Rhea study who became pregnant within one year from February 2007 (Enrolled n=260 mothers and 500 children; Used in analysis n=202). Rhea Study. Within one year beginning February 2007.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Acute (less than 24 hours) Exposure measured concurrently with outcome.	Linear Regression. Confounders adjusted for: child sex, exact age at examination, maternal characteristics (age at delivery, parity, education, pre-pregnancy BMI, smoking in pregnancy).	Lowest exposure concentration for a significant adverse health outcome response: Continuous [geometric mean (SD) child sum DEHP = 0.3 (2.1) nmol/g creatinine]. Beta value (95% CI) for waist circumference per 10-fold increase child sum DEHP:-in boys = -2.6 (-4.72, -0.48), p-sex interaction = 0.003Beta value (95% CI) for sum of skinfolds per 10-fold increase child sum DEHP:-in girls = 7.55 (1.64, 13.46), p-sex interaction = 0.696Beta value (95% CI) for waist-to-height ratio per 10-fold increase child sum DEHP:-in girls = 0.02 (0.01, 0.04), p-sex interaction = 0.006. Significant positive associations between child sum DEHP and sum of skinfolds and weight-height-ratio in girls. An inverse significant association was also reported for waist circumference in boys and sum DEHP. Significant sex interaction terms were reported for all outcomes other than sum of skinfolds..	Vafeiadi et. al 2018 5041285 Medium

Human Health Hazard Epidemology Extraction

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Autistic traits	Health Effect: Neurological/Behavioral-Autistic traits-Non-cancer. Outcome measure: Social Communication Questionnaire (SCQ)	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Adults (18+). South Korea; Seoul and Gyeonggi provinces. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-child pairs in Seoul and Gyeonggi provinces, South Korea (n=527). This study was part of the Environment and Development of Children (EDC) study, which is a prospective birth cohort study in South Korea that enrolled participants from the Congenital Anomaly Study (CAS).. Recruitment: 2008-2010; Follow-up: through child age 8.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure was measured during pregnancy (2nd trimester) and at child ages 4, 6, and 8.	Poisson Regression. Confounders adjusted for: Poisson models for phthalates measured during pregnancy: child's age, sex, twin, birth order, phthalate levels at age of outcome assessment; Poisson models for phthalates measured during childhood: child's age, sex, twin, birth order, maternal education level, current environmental tobacco smoke, phthalate levels at time of SCQ assessment (or phthalate measured at pregnancy); GEE models: age, sex, twin, birth order, maternal education level, current environmental tobacco smoke, phthalate levels during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: continuous. % change in SCQ score (95% CI): Age 8 MnBP level and age 8 SCQ score, all participants: 8.9 (1.2, 17.1); Age 4 MnBP level and age 8 SCQ score, boys: 14.8 (2.9, 28.0); Prenatal MnBP level and age 8 SCQ score, girls: -13.2 (-22.6, -2.6); Age 8 MnBP level and age 8 SCQ score, girls: 11.9 (0.4, 24.8). Statistically significant positive associations were reported for the association between age 8 MnBP and age 8 SCQ score among all participants and among girls. The association between age 8 MnBP level and age 8 SCQ score was positive but not statistically significant among boys. A statistically significant positive association between age 4 MnBP level and age 8 SCQ score was found only among boys. A statistically significant inverse association between prenatal MnBP level and age 8 SCQ was found only among girls. No other statistically significant associations between pairs of exposure and outcome timepoints were found for MnBP. A positive but not statistically significant association was observed in the repeated measures GEE model across timepoints for all participants, boys, and girls..	Kim et. al 2021 9415898 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Autistic traits	Health Effect: Neurological/Behavioral-Autistic traits-Non-cancer. Outcome measure: Social Communication Questionnaire (SCQ)	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Adults (18+). South Korea; Seoul and Gyeonggi provinces. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-child pairs in Seoul and Gyeonggi provinces, South Korea (n=527). This study was part of the Environment and Development of Children (EDC) study, which is a prospective birth cohort study in South Korea that enrolled participants from the Congenital Anomaly Study (CAS).. Recruitment: 2008-2010; Follow-up: through child age 8.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (between 14 and 27 weeks gestation) and at child ages 4, 6, and 8.	Poisson Regression. Confounders adjusted for: Poisson models for phthalates measured during pregnancy: child's age, sex, twin, birth order, phthalate levels at age of outcome assessment; Poisson models for phthalates measured during childhood: child's age, sex, twin, birth order, maternal education level, current environmental tobacco smoke, phthalate levels at time of SCQ assessment (or phthalate measured at pregnancy); GEE models: age, sex, twin, birth order, maternal education level, current environmental tobacco smoke, phthalate levels during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: continuous. % change in SCQ score (95% CI):MEHHP: Prenatal MEHHP level and age 4 SCQ score, all participants: 8.5 (1.9, 15.5); Age 4 MEHHP level and age 8 SCQ score, all participants: 9.9 (1.8, 18.6); Age 8 MEHHP level and age 8 SCQ score, all, participants: 9.6 (1.3, 18.6); Prenatal MEHHP level and age 4 SCQ score, boys: 8.9 (0.8, 17.7); Prenatal MEHHP level and age 6 SCQ score, boys: 8.1 (0.7, 16.1); Age 4 MEHP level and age 8 SCQ score, boys: 17.1 (5.2, 30.4); MEOHP: Prenatal MEOHP level and age 4 SCQ score, all participants: 7.4 (0.3, 15.0); Age 4 MEOHP level and age 8 SCQ score, all participants: 12.9 (3.6, 23.1); Age 8 MEOHP level and age 8 SCQ score, all participants: 12.3 (3.8, 21.5); Age 4 MEOHP level and age 8 SCQ score, boys: 19.6 (6.2, 34.6); MECPP: Age 4 MECPP level and age 8 SCQ score, all participants: 11.7 (1.8, 22.5); Age 4 MECPP level and age 8 SCQ score, boys: 15.7 (1.3, 32.1). Statistically significant positive associations were observed between prenatal MEHHP levels and age 4 SCQ scores among all participants and among boys. Statistically significant positive associations between age 4 MEHHP levels and age 8 SCQ scores were found among all participants and among boys. Statistically significant positive association were found between age 8 MEHHP levels and age 8 SCQ scores among all participants. Statistically significant positive associations were found between prenatal MEHHP levels and age 6 SCQ scores among boys only. No statistically significant associations were found for MEHHP at other time points or in analyses limited to girls only. Associations in the repeated measures GEE model across timepoints were not statistically significant for all participants, boys, or girls. Statistically significant positive associations were found between prenatal MEOHP levels and age 4 SCQ scores, age 4 MEOHP levels and age 8 SCQ scores, and age 8 MEOHP levels and age 8 SCQ scores among all participants. Statistically significant positive associations were found between age 4 MEOHP levels and age 8 SCQ scores among boys only. No statistically significant associations were found for MEOHP at other time points or in analyses limited to girls only. The association in repeated measures GEE model across timepoints was not statistically significant for all participants, boys, or girls. Statistically significant positive associations were found between age 4 MECPP levels and age 8 SCQ scores among all participants and	Kim et. al 2021 9415898 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Autistic traits	Health Effect: Neurological/Behavioral-Autistic traits-Non-cancer. Outcome measure: Social Communication Questionnaire (SCQ)	General public, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Adults (18+). South Korea; Seoul and Gyeonggi provinces. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Mother-child pairs in Seoul and Gyeonggi provinces, South Korea (n=527). This study was part of the Environment and Development of Children (EDC) study, which is a prospective birth cohort study in South Korea that enrolled participants from the Congenital Anomaly Study (CAS).. Recruitment: 2008-2010; Follow-up: through child age 8.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy (between 14 and 27 weeks gestation) and at child ages 4, 6, and 8.	Poisson Regression. Confounders adjusted for: Poisson models for phthalates measured during pregnancy: child's age, sex, twin, birth order, phthalate levels at age of outcome assessment; Poisson models for phthalates measured during childhood: child's age, sex, twin, birth order, maternal education level, current environmental tobacco smoke, phthalate levels at time of SCQ assessment (or phthalate measured at pregnancy); GEE models: age, sex, twin, birth order, maternal education level, current environmental tobacco smoke, phthalate levels during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: continuous. % change in SCQ score (95% CI): Age 4 MBzP level and age 4 SCQ score, all participants: 11.3 (3.7, 19.4); Age 6 MBzP level and age 8 SCQ score, all participants: -10.0 (-15.8, -3.8); Age 8 MBzP level and age 8 SCQ score, all participants: 6.0 (1.4, 10.9); Age 4 MBzP level and age 4 SCQ score, boys: 18.7 (8.2, 30.2); Age 4 MBzP level and age 6 SCQ score, boys: 11.7 (2.1, 22.3); Age 6 MBzP level and age 8 SCQ score, boys: -11.3 (-18.5, -3.5); Age 4 MBzP level and age 8 SCQ score, girls: -14.7 (-24.4, -3.7). For the analyses of all participants, statistically significant positive associations were found between age 4 MBzP level and age 4 SCQ score and between age 8 MBzP level and age 8 SCQ score; and a statistically significant inverse association was found between age 6 MBzP level and age 8 SCQ score.; For the analyses among boys, statistically significant positive associations were found between age 4 MBzP level and age 4 SQC score and between age 4 MBzP level and age 6 SCQ score; and a statistically significant inverse association was found between age 6 MBzP level and age 8 SCQ score.; For the analyses among girls, a statistically significant inverse association was found between age 4 MBzP level and age 8 SCQ score among girls.; No statistically significant associations were found for MBzP at other time points or in other analyses limited to girls only. A positive but not statistically significant association was found in the repeated measures GEE model across timepoints for all participants, boys, and girls..	Kim et. al 2021 9415898 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Depression symptoms	Health Effect: Neurological/Behavioral-Depression symptoms (score on Korean Version of Short Form Geriatric Depression Scale)-Non-cancer. Outcome measure: Korean version of Short Form Geriatric Depression Scale (SGDS-K) questionnaire scores	General public. Adults (18+), Older Adults (65+). South Korea; Seoul. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Older adults (age >= 65 years). Elderly Korean men and women recruited from two welfare community centers in Seoul (Recruited n=560; Used in analysis: 535). Recruitment and follow-up surveys: 2012-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during three visits to welfare community centers during 2012-2014.	Logistic Regression. Confounders adjusted for: age, sex, marital status, education level, number of rooms, moderate physical activity.	Lowest exposure concentration for a significant adverse health outcome response: continuous. % difference (95% CI) per 1 log unit increase in creatinine-adjusted urinary phthalate metabolite concentration (ug/L) for the association between phthalate metabolites and continuous total SGDS-K score:MEHHP: 8.06 (1.89-14.60)MEOHP: 11.95 (5.56-18.73)MECPP: 20.05 (2.62-40.42)Sum of all three DEHP metabolites: 22.23 (4.49–42.98)Sum of MEHHP and MEOHP: 10.32 (4.02–17.00)Odds ratio (95% CI) per 1 log unit increase in creatinine-adjusted urinary phthalate metabolite concentration (ug/L) for the association between phthalate metabolites and dichotomized total SGDS-K score: MEHHP: 1.13 (1.04-1.66)MEOHP: 1.36 (1.09-1.70)MECPP: 1.84 (1.11-3.02)Sum of all three DEHP metabolites: 1.92 (1.17–3.13)Sum of MEHHP and MEOHP: 1.35 (1.07–1.70)% difference (95% CI) per 1 log unit increase in creatinine-adjusted urinary phthalate metabolite concentration (ug/L) for the association between phthalate metabolites and affective symptoms: MEOHP: 9.72 (1.59-18.51)MECPP: 28.22 (2.71-60.07)Sum of all three DEHP metabolites: 30.46 (6.40–59.96)% difference (95% CI) per 1 log unit increase in creatinine-adjusted urinary phthalate metabolite concentration (ug/L) for the association between phthalate metabolites and spiritual symptoms: MEOHP: 13.73 (2.21-26.56)Sum of MEHHP and MEOHP: 13.01 (0.61–26.94). MEHHP, MEOHP, MECPP, and both sum DEHP measures were significantly associated with higher depressive symptoms based on the SGDS-K questionnaire. MEOHP, MECPP, and the sum of MEHHP, MEOHP, and MECPP were significantly associated with higher affective symptoms. MEOHP and the sum of MEOHP and MEHHP were significantly associated with higher spiritual symptoms..	Lee et. al 2018 5556125 Medium

Human Health Hazard Epidemology Extraction

Diethylhexyl Phthalate Metabolite: mono-(2-ethylhexyl) phthalate (MEHP), mono-(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono-(2-ethyl-5-oxohexyl) phthalate (MEOHP)

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Systolic blood pressure index	Health Effect: Reproductive/Developmental-systolic blood pressure, hypertension-Non-cancer-Cardiovascular-systolic blood pressure, hypertension-Non-cancer. Outcome measure: Medical Records	Patients in clinics. Infant (0-1). United States; Oregon. Female, Male. Cohort (Prospective). PESS: Lifestage , Other PESS category specified in the reference. Lifestage PESS: Infants (birth through < 12 months). Premature infants with and without systolic hypertension. Recruitment and follow-up: ~2018.	Other (specify), Indices of DEHP related to IV administration and respiratory tube use Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure calculated based on IV fluid volume and respiratory tube exposure days.	Linear Regression. Confounders adjusted for: None.	Lowest exposure concentration for a significant adverse health outcome response: continuous. beta (95% CI) for continuous DEHP IV exposure index (mL) and SBP index = 0.0004 (0.0001–0.0008). In a bivariate regression model, higher DEHP-containing IV fluid exposure was associated with a significantly higher SBP index (based on mean SBP ratio to the 95th percentile in the reference population)..	Jenkins et. al 2019 5625293 Low

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
BMI increase	Health Effect: Nutritional/Metabolic-BMIGlucoseInsulinHOMA-IR (homeostatic model assessment of insulin resistance)TyG index (triglyceride glucose)VAI (visceral adiposity index)LAP (lipid accumulation product)-Non-cancer. Outcome measure: calculated BMI (body weight divided by height squared (kg/m^2))	General public. Adults (18+). Serbia; Novi Sad. Male. Cross-Sectional. PESS: . 102 males in Serbia. June 2015- June 2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring at the time of outcome measurement.	ANOVA. Confounders adjusted for: n/a.	Lowest exposure concentration for a significant adverse health outcome response: exposed. Increase in mean BMI between MEHP+ and MEHP- volunteers of normal weight. MEHP+ 24.59 +/- 0.25 kg/m^2MEHP- 23.80 +/- 1.50 kg/m^2p= 0.02. Significant increase in mean BMI between MEHP+ and MEHP- volunteers of normal weight..	Milošević et. al 2018 5705574 nan
HDL serum levels	Health Effect: Cardiovascular-HDLLDLTGTotal cholesterol-Non-cancer. Outcome measure: Fasting blood draw; direct phenol colorimetric analyses	General public. Adults (18+). Serbia; Novi Sad. Male. Cross-Sectional. PESS: . 102 adult males in Serbia. June 2015-June 2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring at time of outcome assessment.	Linear Regression.	Lowest exposure concentration for a significant adverse health outcome response: MEHP+. $r^2 = 0.31 p < 0.05$. Significant decrease of HDL serum levels associated with MEHP+ among normal weight volunteers.	Milošević et. al 2018 5705574 nan

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Placental weight, birth weight to placental weight ratio	Health Effect: Reproductive/Developmental- Placental weight, birth weight to placental weight ratio-Non-cancer. Outcome measure: Medical records	General public, Pregnant people. Infant (0-1), Adults (18+). United States; Massachusetts. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Sub-fertile adults receiving care at a fertility center in Massachusetts, followed from preconception through birth. Environment and Reproductive Health (EARTH) Study. 2005 to 2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured preconception and during gestation.	Linear Regression. Confounders adjusted for: maternal age, maternal BMI, maternal education, maternal smoking status, and infant sex; paternal preconception exposures were additionally adjusted for paternal age and BMI and paternal smoking.	Lowest exposure concentration for a significant adverse health outcome response: Continuous; SG-adjusted ∑DEHP geometric mean (GSD) for paternal preconception samples = 61.6 (9.24) ng/mL, maternal preconception samples = 49.3 (3.08), maternal prenatal samples = 46.2 (6.2) ng/mL.. Beta (95% CI) for change in placental weight (g) per natural log increase in urinary phthalate measures:- ∑DEHP, paternal preconception = −24 (−48, −1), p=0.04-MECPP, paternal preconception = −25 (−49, −2), p=0.03Not significant for other time points or DEHP metabolites.. Paternal preconception concentrations of the sum of DEHP metabolites (MEHP, MEHHP, MEOHP and MECPP) and MECPP were associated with significantly lower placental weight. Associations with maternal preconception and prenatal exposures did not reach significance. Associations with the birth weight to placental weight ratio were also non-significant..	Mustieles et. al 2019 5742214 Medium

Human Health Hazard Epidemology Extraction

Diethylhexyl Phthalate Metabolite: mono-2-ethylhexyl phthalate (MEHP), mono (2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono(2-ethyl-5-oxohexyl) phthalate (MEOHP)

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL) scores: anxious/depressed	Health Effect: Neurological/Behavioral-Child Behavior Checklist Scores for internalizing problems (somatic complains, anxious or depressed, withdrawn) and externalizing problems (delinquent behavior, aggressive behavior)-Non-cancer. Outcome measure: Questionnaire (maternal report)	General public. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 153 mother-child pairs. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Maternal exposure measured during 3-rd trimester of pregnancy; child exposure measured at 2-3 yrs, 5-6 yrs and 8-9 yrs.	Linear mixed model. Confounders adjusted for: children's sex, IQ, family income, and study visit.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) per 1-unit increase in ln-maternal MEHP : 0.029 (0.004, 0.054). Significant positive association for maternal MEHP and children's anxious/depressed T scores measured at ages 8 to 14 years (adjusted for children's urinary phthalate metabolites)..	Huang et. al 2019 5750709 Medium

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Diethylhexyl Phthalate Metabolite: mono-2-ethylhexyl phthalate (MEHP), mono(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono(2-ethyl-5-oxohexyl) phthalate (MEOHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL) scores: social problems	Health Effect: Neurological/Behavioral-Child Behavior Checklist Scores for internalizing problems (somatic complains, anxious or depressed, withdrawn) and externalizing problems (delinquent behavior, aggressive behavior)-Non-cancer. Outcome measure: Questionnaire (maternal report)	General public. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 153 mother-child pairs. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Maternal exposure measured during 3-rd trimester of pregnancy; child exposure measured at 2-3 yrs, 5-6 yrs and 8-9 yrs.	Linear mixed model. Confounders adjusted for: children's sex, IQ, family income, and study visit.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) per 1-unit increase in ln-maternal MEHP: 0.033 (0.003, 0.063). Significant positive association for maternal MEHP and children's social problems T scores measured at ages 8 to 14 years (adjusted for children's urinary phthalate metabolites)..	Huang et. al 2019 5750709 Medium

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Diethylhexyl Phthalate Metabolite: mono-2-ethylhexyl phthalate (MEHP), mono(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono(2-ethyl-5-oxohexyl) phthalate (MEOHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL) scores: thought problems	Health Effect: Neurological/Behavioral-Child Behavior Checklist Scores for internalizing problems (somatic complains, anxious or depressed, withdrawn) and externalizing problems (delinquent behavior, aggressive behavior)-Non-cancer. Outcome measure: Questionnaire (maternal report)	General public. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 153 mother-child pairs. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Maternal exposure measured during 3-rd trimester of pregnancy; child exposure measured at 2-3 yrs, 5-6 yrs and 8-9 yrs.	Linear mixed model. Confounders adjusted for: children's sex, IQ, family income, and study visit.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) per 1-unit increase in ln-maternal MEHP: 0.038 (0.006, 0.070). Significant positive association for maternal MEHP and children's thought problems T scores measured at ages 8 to 14 years (adjusted for children's urinary phthalate metabolites)..	Huang et. al 2019 5750709 Medium

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Diethylhexyl Phthalate Metabolite: mono-2-ethylhexyl phthalate (MEHP), mono(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono(2-ethyl-5-oxohexyl) phthalate (MEOHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL) scores: attention problems	Health Effect: Neurological/Behavioral-Child Behavior Checklist Scores for internalizing problems (somatic complains, anxious or depressed, withdrawn) and externalizing problems (delinquent behavior, aggressive behavior)-Non-cancer. Outcome measure: Questionnaire (maternal report)	General public. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 153 mother-child pairs. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Maternal exposure measured during 3-rd trimester of pregnancy; child exposure measured at 2-3 yrs, 5-6 yrs and 8-9 yrs.	Linear mixed model. Confounders adjusted for: children's sex, IQ, family income, and study visit.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) per 1-unit increase in ln-maternal MEHP: 0.040 (0.008, 0.072). Significant positive association for maternal MEHP and attention problems T scores measured at age 8 to 14 years, adjusted for children's urinary phthalate metabolites..	Huang et. al 2019 5750709 Medium

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Diethylhexyl Phthalate Metabolite: mono-2-ethylhexyl phthalate (MEHP), mono(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono(2-ethyl-5-oxohexyl) phthalate (MEOHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL) scores: delinquent behaviour	Health Effect: Neurological/Behavioral-Child Behavior Checklist Scores for internalizing problems (somatic complains, anxious or depressed, withdrawn) and externalizing problems (delinquent behavior, aggressive behavior)-Non-cancer. Outcome measure: Questionnaire (maternal report)	General public. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 153 mother-child pairs. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Maternal exposure measured during 3-rd trimester of pregnancy; child exposure measured at 2-3 yrs, 5-6 yrs and 8-9 yrs.	Linear mixed model. Confounders adjusted for: children's sex, IQ, family income, and study visit.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) per 1-unit increase in ln-maternal MEHP: 0.044 (0.019, 0.069). Significant positive association for maternal MEHP and child delinquent behavior T scores measured at ages 8 to 14 years (adjusted for children's urinary phthalate metabolites)..	Huang et. al 2019 5750709 Medium

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Diethylhexyl Phthalate Metabolite: mono-2-ethylhexyl phthalate (MEHP), mono(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono(2-ethyl-5-oxohexyl) phthalate (MEOHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL) scores: aggressive behaviors	Health Effect: Neurological/Behavioral-Child Behavior Checklist Scores for internalizing problems (somatic complains, anxious or depressed, withdrawn) and externalizing problems (delinquent behavior, aggressive behavior)-Non-cancer. Outcome measure: Questionnaire (maternal report)	General public. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 153 mother-child pairs. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Maternal exposure measured during 3-rd trimester of pregnancy; child exposure measured at 2-3 yrs, 5-6 yrs and 8-9 yrs.	Linear mixed model. Confounders adjusted for: children's sex, IQ, family income, and study visit.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) per 1-unit increase in ln-maternal MEHP: 0.034 (0.008, 0.061). Significant positive associations for maternal MEHP and child aggressive behavior T scores at ages 8 to 14 years (adjusted for children's urinary phthalate metabolites)..	Huang et. al 2019 5750709 Medium

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Diethylhexyl Phthalate Metabolite: mono-2-ethylhexyl phthalate (MEHP), mono(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono(2-ethyl-5-oxohexyl) phthalate (MEOHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL) scores: internalizing problems	Health Effect: Neurological/Behavioral-Child Behavior Checklist Scores for internalizing problems (somatic complains, anxious or depressed, withdrawn) and externalizing problems (delinquent behavior, aggressive behavior)-Non-cancer. Outcome measure: Questionnaire (maternal report)	General public. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 153 mother-child pairs. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Maternal exposure measured during 3-rd trimester of pregnancy; child exposure measured at 2-3 yrs, 5-6 yrs and 8-9 yrs.	Linear mixed model. Confounders adjusted for: children's sex, IQ, family income, and study visit.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) per 1-unit increase in ln-maternal MEHP: 0.028 (0.0004, 0.055). Significant positive associations for maternal MEHP and child internalizing problems scores measured at ages 8 to 14 years (adjusted for children's urinary phthalate metabolites)..	Huang et. al 2019 5750709 Medium

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Diethylhexyl Phthalate Metabolite: mono-2-ethylhexyl phthalate (MEHP), mono(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono(2-ethyl-5-oxohexyl) phthalate (MEOHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL) scores: externalizing problems	Health Effect: Neurological/Behavioral-Child Behavior Checklist Scores for internalizing problems (somatic complains, anxious or depressed, withdrawn) and externalizing problems (delinquent behavior, aggressive behavior)-Non-cancer. Outcome measure: Questionnaire (maternal report)	General public. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 153 mother-child pairs. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Maternal exposure measured during 3-rd trimester of pregnancy; child exposure measured at 2-3 yrs, 5-6 yrs and 8-9 yrs.	Linear mixed model. Confounders adjusted for: children's sex, IQ, family income, and study visit.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) per 1-unit increase in ln-maternal MEHP: 0.040 (0.013, 0.066). Significant positive associations for maternal MEHP and child externalizing problems scores measured at ages 8 to 14 years (adjusted for children's urinary phthalate metabolites)..	Huang et. al 2019 5750709 Medium

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Diethylhexyl Phthalate Metabolite: mono-2-ethylhexyl phthalate (MEHP), mono(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono(2-ethyl-5-oxohexyl) phthalate (MEOHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL) scores: delinquent behaviour	Health Effect: Neurological/Behavioral-Child Behavior Checklist Scores for internalizing problems (somatic complains, anxious or depressed, withdrawn) and externalizing problems (delinquent behavior, aggressive behavior)-Non-cancer. Outcome measure: Questionnaire (maternal report)	General public. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 153 mother-child pairs. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Maternal exposure measured during 3-rd trimester of pregnancy; child exposure measured at 2-3 yrs, 5-6 yrs and 8-9 yrs.	Linear mixed model. Confounders adjusted for: children's sex, IQ, family income, and study visit.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) per 1-unit increase in ln-maternal sum of DEHP metabolites: 0.035 (0.013, 0.058). Significant positive association for maternal sum of DEHP metabolites and delinquent behavior T scores measured at ages 8 to 14 years (adjusted for children's urinary phthalate metabolites)..	Huang et. al 2019 5750709 Medium

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Diethylhexyl Phthalate Metabolite: mono-2-ethylhexyl phthalate (MEHP), mono(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono(2-ethyl-5-oxohexyl) phthalate (MEOHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL) scores: externalizing problems	Health Effect: Neurological/Behavioral-Child Behavior Checklist Scores for internalizing problems (somatic complains, anxious or depressed, withdrawn) and externalizing problems (delinquent behavior, aggressive behavior)-Non-cancer. Outcome measure: Questionnaire (maternal report)	General public. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 153 mother-child pairs. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Maternal exposure measured during 3-rd trimester of pregnancy; child exposure measured at 2-3 yrs, 5-6 yrs and 8-9 yrs.	Linear mixed model. Confounders adjusted for: children's sex, IQ, family income, and study visit.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) per 1-unit increase in ln-maternal sum of DEHP metabolites: 0.026 (0.002, 0.051). Significant positive associations for maternal sum of DEHP metabolites and child externalizing problems measured at ages 8 to 14 years (adjusted for children's urinary phthalate metabolites)..	Huang et. al 2019 5750709 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL) scores: social problems	Health Effect: Neurological/Behavioral-Child Behavior Checklist Scores for internalizing problems (somatic complains, anxious or depressed, withdrawn) and externalizing problems (delinquent behavior, aggressive behavior)-Non-cancer. Outcome measure: Questionnaire (maternal report)	General public. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 153 mother-child pairs. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Maternal exposure measured during 3-rd trimester of pregnancy; child exposure measured at 2-3 yrs, 5-6 yrs and 8-9 yrs.	Linear mixed model. Confounders adjusted for: children's sex, IQ, family income, and study visit.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Beta (95% CI) per 1-unit increase in ln-child MBzP: 0.018 (0.001, 0.035). Significant positive associations for child MBzP and social problems T scores measured at ages 8-14 years, adjusted for maternal MBzP..	Huang et. al 2019 5750709 Medium

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Diethylhexyl Phthalate Metabolite: mono-2-ethylhexyl phthalate (MEHP), mono (2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono(2-ethyl-5-oxohexyl) phthalate (MEOHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL) scores: internalizing problems (borderline vs normal range)	Health Effect: Neurological/Behavioral-Child Behavior Checklist Scores for internalizing problems (somatic complains, anxious or depressed, withdrawn) and externalizing problems (delinquent behavior, aggressive behavior)-Non-cancer. Outcome measure: Questionnaire (maternal report)	General public. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 153 mother-child pairs. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Maternal exposure measured during 3-rd trimester of pregnancy; child exposure measured at 2-3 yrs, 5-6 yrs and 8-9 yrs.	Generalized linear mixed model. Confounders adjusted for: children's sex, IQ, family income, and study visit.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for odds of borderline problematic vs. normal range internalizing behavior scores per 1-unit increase in ln-maternal MEHP: 2.33 (1.20, 4.55). Significant positive associations for maternal MEHP and odds of borderline problematic internalizing behavior scores at ages 8 to 14 years (adjusted for children's urinary phthalate metabolites)..	Huang et. al 2019 5750709 Medium

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Human Health Hazard Epidemology Extraction

Diethylhexyl Phthalate Metabolite: mono-2-ethylhexyl phthalate (MEHP), mono(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono(2-ethyl-5-oxohexyl) phthalate (MEOHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL) scores: internalizing problems (borderline/clinical vs normal range)	Health Effect: Neurological/Behavioral-Child Behavior Checklist Scores for internalizing problems (somatic complains, anxious or depressed, withdrawn) and externalizing problems (delinquent behavior, aggressive behavior)-Non-cancer. Outcome measure: Questionnaire (maternal report)	General public. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 153 mother-child pairs. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Maternal exposure measured during 3-rd trimester of pregnancy; child exposure measured at 2-3 yrs, 5-6 yrs and 8-9 yrs.	Generalized linear mixed model. Confounders adjusted for: children's sex, IQ, family income, and study visit.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for odds of borderline/clinical compared to normal range internalizing behavior scores per 1-unit increase in ln-maternal MEHP: 1.69 (1.12, 2.56). Significant positive associations for maternal MEHP and odds of borderline/clinical vs. normal range internalizing behavior scores measured at ages 8 to 14 years (adjusted for children's urinary phthalate metabolites)..	Huang et. al 2019 5750709 Medium

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Diethylhexyl Phthalate Metabolite: mono-2-ethylhexyl phthalate (MEHP), mono (2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono(2-ethyl-5-oxohexyl) phthalate (MEOHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL) scores: internalizing problems (borderline/clinical vs normal range)	Health Effect: Neurological/Behavioral-Child Behavior Checklist Scores for internalizing problems (somatic complains, anxious or depressed, withdrawn) and externalizing problems (delinquent behavior, aggressive behavior)-Non-cancer. Outcome measure: Questionnaire (maternal report)	General public. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 153 mother-child pairs. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Maternal exposure measured during 3-rd trimester of pregnancy; child exposure measured at 2-3 yrs, 5-6 yrs and 8-9 yrs.	Generalized linear mixed model. Confounders adjusted for: children's sex, IQ, family income, and study visit.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for odds of borderline/clinical compared to normal range internalizing behavior scores per 1-unit increase in ln-maternal sum of DEHP metabolites: 1.52 (1.02, 2.28). Significant positive associations for maternal sum of DEHP metabolites and odds of borderline/clinical vs. normal range internalizing behavior scores at ages 8 to 14 years (adjusted for children's urinary phthalate metabolites)..	Huang et. al 2019 5750709 Medium

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Diethylhexyl Phthalate Metabolite: mono-2-ethylhexyl phthalate (MEHP), mono(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono(2-ethyl-5-oxohexyl) phthalate (MEOHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL) scores: externalizing problems (borderline vs normal range)	Health Effect: Neurological/Behavioral-Child Behavior Checklist Scores for internalizing problems (somatic complains, anxious or depressed, withdrawn) and externalizing problems (delinquent behavior, aggressive behavior)-Non-cancer. Outcome measure: Questionnaire (maternal report)	General public. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 153 mother-child pairs. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Maternal exposure measured during 3-rd trimester of pregnancy; child exposure measured at 2-3 yrs, 5-6 yrs and 8-9 yrs.	Generalized linear mixed model. Confounders adjusted for: children's sex, IQ, family income, and study visit.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for odds of borderline compared to normal range externalizing behavior scores per 1-unit increase in ln-maternal MEHP: 2.24 (1.29, 3.89). Significant positive associations for maternal MEHP and odds of borderline vs. normal range externalizing behavior scores at ages 8 to 14 years (adjusted for children's urinary phthalate metabolites)..	Huang et. al 2019 5750709 Medium

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Diethylhexyl Phthalate Metabolite: mono-2-ethylhexyl phthalate (MEHP), mono (2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono(2-ethyl-5-oxohexyl) phthalate (MEOHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL) scores: externalizing problems (borderline/clinical vs normal range)	Health Effect: Neurological/Behavioral-Child Behavior Checklist Scores for internalizing problems (somatic complains, anxious or depressed, withdrawn) and externalizing problems (delinquent behavior, aggressive behavior)-Non-cancer. Outcome measure: Questionnaire (maternal report)	General public. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 153 mother-child pairs. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Maternal exposure measured during 3-rd trimester of pregnancy; child exposure measured at 2-3 yrs, 5-6 yrs and 8-9 yrs.	Generalized linear mixed model. Confounders adjusted for: children's sex, IQ, family income, and study visit.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for odds of borderline/clinical compared to normal range externalizing behavior scores per 1-unit increase in ln-maternal MEHP: 2.39 (1.44, 3.97). Significant positive associations for maternal MEHP and odds of borderline/clinical vs normal range externalizing behavior scores at ages 8 to 14 years (adjusted for children's urinary phthalate metabolites)..	Huang et. al 2019 5750709 Medium

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Diethylhexyl Phthalate Metabolite: mono-2-ethylhexyl phthalate (MEHP), mono(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono(2-ethyl-5-oxohexyl) phthalate (MEOHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL) scores: externalizing problems (clinical vs normal range)	Health Effect: Neurological/Behavioral-Child Behavior Checklist Scores for internalizing problems (somatic complains, anxious or depressed, withdrawn) and externalizing problems (delinquent behavior, aggressive behavior)-Non-cancer. Outcome measure: Questionnaire (maternal report)	General public. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 153 mother-child pairs. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Maternal exposure measured during 3-rd trimester of pregnancy; child exposure measured at 2-3 yrs, 5-6 yrs and 8-9 yrs.	Generalized linear mixed model. Confounders adjusted for: children's sex, IQ, family income, and study visit.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for odds of clinical compared to normal range externalizing behavior scores per 1-unit increase in ln-maternal MEHP: 2.41 (1.34, 4.34). Significant positive associations for maternal MEHP and odds of clinical vs. normal range externalizing behavior scores at ages 8 to 14 years (adjusted for children's urinary phthalate metabolites)..	Huang et. al 2019 5750709 Medium

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Diethylhexyl Phthalate Metabolite: mono-2-ethylhexyl phthalate (MEHP), mono (2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono(2-ethyl-5-oxohexyl) phthalate (MEOHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL) scores: externalizing problems (borderline vs normal range)	Health Effect: Neurological/Behavioral-Child Behavior Checklist Scores for internalizing problems (somatic complains, anxious or depressed, withdrawn) and externalizing problems (delinquent behavior, aggressive behavior)-Non-cancer. Outcome measure: Questionnaire (maternal report)	General public. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 153 mother-child pairs. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Maternal exposure measured during 3-rd trimester of pregnancy; child exposure measured at 2-3 yrs, 5-6 yrs and 8-9 yrs.	Generalized linear mixed model. Confounders adjusted for: children's sex, IQ, family income, and study visit.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for odds of borderline compared to normal range externalizing behavior scores per 1-unit increase in ln-maternal sum of DEHP metabolites: 2.20 (1.25, 3.89). Significant positive associations for maternal sum of DEHP metabolites and odds of borderline vs. normal externalizing behavior scores at ages 8 to 14 years (adjusted for children's urinary phthalate metabolites)..	Huang et. al 2019 5750709 Medium

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Diethylhexyl Phthalate Metabolite: mono-2-ethylhexyl phthalate (MEHP), mono(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono(2-ethyl-5-oxohexyl) phthalate (MEOHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL) scores: externalizing problems (clinical vs normal range)	Health Effect: Neurological/Behavioral-Child Behavior Checklist Scores for internalizing problems (somatic complains, anxious or depressed, withdrawn) and externalizing problems (delinquent behavior, aggressive behavior)-Non-cancer. Outcome measure: Questionnaire (maternal report)	General public. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 153 mother-child pairs. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Maternal exposure measured during 3-rd trimester of pregnancy; child exposure measured at 2-3 yrs, 5-6 yrs and 8-9 yrs.	Generalized linear mixed model. Confounders adjusted for: children's sex, IQ, family income, and study visit.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for odds of clinical compared to normal range externalizing behavior scores per 1-unit increase in ln-maternal sum of DEHP metabolites: 2.12 (1.17, 3.84). Significant positive associations for maternal sum of DEHP metabolites and odds of clinical vs. normal range externalizing behavior scores (adjusted for children's urinary phthalate metabolites)..	Huang et. al 2019 5750709 Medium

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Diethylhexyl Phthalate Metabolite: mono-2-ethylhexyl phthalate (MEHP), mono (2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono(2-ethyl-5-oxohexyl) phthalate (MEOHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL) scores: externalizing problems (borderline/clinical vs normal range)	Health Effect: Neurological/Behavioral-Child Behavior Checklist Scores for internalizing problems (somatic complains, anxious or depressed, withdrawn) and externalizing problems (delinquent behavior, aggressive behavior)-Non-cancer. Outcome measure: Questionnaire (maternal report)	General public. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 153 mother-child pairs. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Maternal exposure measured during 3-rd trimester of pregnancy; child exposure measured at 2-3 yrs, 5-6 yrs and 8-9 yrs.	Generalized linear mixed model. Confounders adjusted for: children's sex, IQ, family income, and study visit.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for odds of borderline/clinical compared to normal range externalizing behavior scores per 1-unit increase in ln-maternal sum of DEHP metabolites: 2.19 (1.34, 3.57). Significant positive associations for maternal sum of DEHP metabolites and odds of borderline/clinical vs. normal range externalizing behavior scores at ages 8 to 14 years (adjusted for children's urinary phthalate metabolites)..	Huang et. al 2019 5750709 Medium

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Diethylhexyl Phthalate Metabolite: mono-2-ethylhexyl phthalate (MEHP), mono (2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono(2-ethyl-5-oxohexyl) phthalate (MEOHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL) scores: externalizing problems (borderline vs normal range)	Health Effect: Neurological/Behavioral-Child Behavior Checklist Scores for internalizing problems (somatic complains, anxious or depressed, withdrawn) and externalizing problems (delinquent behavior, aggressive behavior)-Non-cancer. Outcome measure: Questionnaire (maternal report)	General public. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 153 mother-child pairs. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Maternal exposure measured during 3-rd trimester of pregnancy; child exposure measured at 2-3 yrs, 5-6 yrs and 8-9 yrs.	Generalized linear mixed model. Confounders adjusted for: children's sex, IQ, family income, and study visit.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for odds of borderline compared to normal range externalizing behavior scores per 1-unit increase in ln-maternal MBP: 1.90 (1.03, 3.51). Significant positive associations for maternal MBP and odds of borderline vs. normal range externalizing behavior scores at ages 8 to 14 years (adjusted for children's urinary phthalate metabolites)..	Huang et. al 2019 5750709 Medium

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Human Health Hazard Epidemology Extraction

Diethylhexyl Phthalate Metabolite: mono-2-ethylhexyl phthalate (MEHP), mono (2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono(2-ethyl-5-oxohexyl) phthalate (MEOHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child Behavior Checklist (CBCL) scores: externalizing problems (borderline/clinical vs. normal range)	Health Effect: Neurological/Behavioral-Child Behavior Checklist Scores for internalizing problems (somatic complains, anxious or depressed, withdrawn) and externalizing problems (delinquent behavior, aggressive behavior)-Non-cancer. Outcome measure: Questionnaire (maternal report)	General public. Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17), Adults (18+). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). 153 mother-child pairs. Taiwan Maternal and Infant Cohort Study. Recruitment: December 1, 2000-November 30, 2001; Follow-up: through 2015.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Maternal exposure measured during 3-rd trimester of pregnancy; child exposure measured at 2-3 yrs, 5-6 yrs and 8-9 yrs.	Generalized linear mixed model. Confounders adjusted for: children's sex, IQ, family income, and study visit.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for odds of borderline/clinical compared to normal range externalizing behavior scores per 1-unit increase in ln-maternal MBP: 1.72 (1.03, 2.89). Significant positive associations for maternal MBP and odds of borderline/clinical vs. normal range externalizing behavior scores at ages 8 to 14 years (adjusted for children's urinary phthalate metabolites)..	Huang et. al 2019 5750709 Medium

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child cognition and psychomotor development (domains: fluid intelligence, crystallized intelligence, cognition, mathematical skills, psychomotor skills, language skills).	Health Effect: Neurological/Behavioral-Child behavior (domains: conduct problems, emotional symptoms, hyperactivity-inattention problems, peer relationship problems, total difficulties, prosocial behavior)-Non-cancer. Outcome measure: Intelligence and Development Scales	Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Adults (18+). Poland; Lodz district. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). A subset of mother-child pairs from the Polish Mother and Child Cohort (recruitment beginning 2007), Poland, Lodz district, n=134 mother child pairs. Polish Mother and Child Cohort. Recruitment: 2007; Follow-up through age 7.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during third trimester of pregnancy and when child was age 2.	Linear Regression. Confounders adjusted for: child's sex, child's age at the neurodevelopmental assessment, prenatal tobacco smoke exposure (based on the cotinine level in maternal saliva),postnatal tobacco smoke exposure (based on cotinine level in child urine), maternal educational levels at child examination, place of residence, birth weight (g), psychologist who have performed child neurodevelopmental examination.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI):MnBP in child urine samples and fluid intelligence: -4.91 (-9.32, 0.50)MNBP in child urine samples and cognition: -3.95 (-7.53, 0.38). Significant inverse associations between MnBP measured postnatally in child urine samples and both fluid intelligence and cognition. No significant associations between MnBP and other measures of child cognition and psychomotor development, or between OH-MnBP and any measures..	Jankowska et. al 2019 5933662 Medium

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Diethylhexyl Phthalate — Metabolite; Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP)

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child cognition and psychomotor development (domains: fluid intelligence, crystallized intelligence, cognition, mathematical skills, psychomotor skills, language skills).	Health Effect: Neurological/Behavioral-Child cognition and psychomotor development (domains: fluid intelligence, crystallized intelligence, cognition, mathematical skills, psychomotor skills, language skills)-Non-cancer. Outcome measure: Intelligence and Development Scales	Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Adults (18+). Poland; Lodz district. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). A subset of mother-child pairs from the Polish Mother and Child Cohort (recruitment beginning 2007), Poland, Lodz district, n=134 mother child pairs. Polish Mother and Child Cohort. Recruitment: 2007; Follow-up through age 7.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during third trimester of pregnancy and when child was age 2.	Linear Regression. Confounders adjusted for: child's sex, child's age at the neurodevelopmental assessment, prenatal tobacco smoke exposure (based on the cotinine level in maternal saliva),postnatal tobacco smoke exposure (based on cotinine level in child urine), maternal educational levels at child examination, place of residence, birth weight (g), psychologist who have performed child neurodevelopmental examination.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI):oxo-MEHP in maternal urine samples and fluid intelligence: 3.59 (0.30, 6.87)oxo-MEHP in maternal urine samples and cognition: 2.87 (0.21, 5.54). Significant positive associations between oxo-MEHP measured prenatally in maternal third trimester urine samples and both fluid intelligence and cognition. No significant associations between oxo-MEHP and other measures of child cognition and psychomotor development, or between OH-MEHP and any measures..	Jankowska et. al 2019 5933662 Medium

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
uterine fibroids	Health Effect: Reproductive/Developmental-Uterine fibroids-Non-cancer. Outcome measure: diagnosis	General public. Adults (18+). South Korea; Seoul, Ansan, Incheon, Jeju. Female. Case-Control. PESS: . 2015-2016, South Korea, 111 women (20-49 years of age) (32 uterine fibroid cases and 79 controls). 2015-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring at health examination.	nan. Confounders adjusted for: Adjusted for age, income, parity, urinary cotinine, alcohol consumption, and BMI.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Factor 1 (DEHP, DBP, and BBZP) OR (95% CI) for Tertile 3, Tertile 2: 2.71 (0.73, 10.12), 2.03 (0.54, 7.65)Factor 2 (DEHP and DPrHpP) OR (95% CI) for Tertile 3, Tertile 2: 4.60 (1.10, 19.20), 3.62 (0.87, 15.10). Significance found between cases and controls for sum of DEHP concentrations (p-value: 0.023) as DEHP concentrations were significantly higher in the cases than controls. Individual significance also found for MEOHP between cases and controls (p-value 0.032) as MEOHP concentrations were significantly higher in cases than controls. Significance also found for multiple chemical exposure of DEHP and DPrHpP ($p < 0.05$) and association with uterine fibroids..	Lee et. al 2020 7274600 Medium
uterine fibroids	Health Effect: Reproductive/Developmental-Uterine fibroids-Non-cancer. Outcome measure: diagnosis	General public. Adults (18+). South Korea; Seoul, Ansan, Incheon, Jeju. Female. Case-Control. PESS: . 2015-2016, South Korea, 111 women (20-49 years of age) (32 uterine fibroid cases and 79 controls). 2015-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring at health examination.	nan. Confounders adjusted for: Adjusted for age, income, parity, urinary cotinine, alcohol consumption, and BMI.	Lowest exposure concentration for a significant adverse health outcome response: continuous. OR (95% CI) for Q2 vs Q1: 4.82 (1.09-21.27). Significance found between cases and controls for MBzP concentrations with increased ORs of uterine fibroids..	Lee et. al 2020 7274600 Medium

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child non-verbal IQ	Health Effect: Reproductive/Developmental-Child nonverbal IQ-Non-cancer-Neurological/Behavioral-Child nonverbal IQ-Non-cancer. Outcome measure: Child nonverbal IQ determined by administering Mosaics and Categories subtests from Snijders-Oomen Nonverbal Intelligence Test Revised (SON-R)	General public, Pregnant people. Middle childhood (6-11). Netherlands; Rotterdam. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters, Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Pregnant women living in Rotterdam who are enrolled in Generation R cohort (analysis sample included 1,282 mother child pairs). Generation R. Enrollment: 2002-2006; Follow-up: Year NR (child 6 years of age).	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during early pregnancy (<18 weeks), mid pregnancy (18-25 weeks), and late pregnancy (>25 weeks).	Linear Regression. Confounders adjusted for: Maternal age, ethnicity, education, income, marital status, alcohol consumption during pregnancy, maternal nonverbal IQ, preppregnancy BMI, parity, smoking during pregnancy, child sex, child age at assessment.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) per 1 log10 unit increase in creatinine-adjusted total low molecular weight phthalate metabolites concentration (ug/g Cr) at <18 weeks of gestation for child nonverbal IQ: -1.75 (-3.21, -0.29). There were significant associations between creatinine adjusted LMWP metabolite concentrations at <18 weeks of gestation and child nonverbal score..	Dries et. al 2020 9387317 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child non-verbal IQ	Health Effect: Reproductive/Developmental-Child nonverbal IQ-Non-cancer-Neurological/Behavioral-Child nonverbal IQ-Non-cancer. Outcome measure: Child nonverbal IQ determined by administering Mosaics and Categories subtests from Snijders-Oomen Nonverbal Intelligence Test Revised (SON-R)	General public, Pregnant people. Middle childhood (6-11). Netherlands; Rotterdam. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters, Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Pregnant women living in Rotterdam who are enrolled in Generation R cohort (analysis sample included 1,282 mother child pairs). Generation R. Enrollment: 2002-2006; Follow-up: Year NR (child 6 years of age).	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during early pregnancy (<18 weeks), mid pregnancy (18-25 weeks), and late pregnancy (>25 weeks).	Linear Regression. Confounders adjusted for: Maternal age, ethnicity, education, income, marital status, alcohol consumption during pregnancy, maternal nonverbal IQ, preppregnancy BMI, parity, smoking during pregnancy, child sex, child age at assessment.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) per 1 log10 unit increase in creatinine-adjusted total low molecular weight phthalate metabolites concentration (ug/g Cr) at <18 weeks of gestation for child nonverbal IQ: -1.75 (-3.21, -0.29). There were significant associations between creatinine adjusted LMWP metabolite concentrations at <18 weeks of gestation and child nonverbal score..	Dries et. al 2020 9387317 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child non-verbal IQ	Health Effect: Reproductive/Developmental-Child nonverbal IQ-Non-cancer-Neurological/Behavioral-Child nonverbal IQ-Non-cancer. Outcome measure: Child nonverbal IQ determined by administering Mosaics and Categories subtests from Snijders-Oomen Nonverbal Intelligence Test Revised (SON-R)	General public, Pregnant people. Middle childhood (6-11). Netherlands; Rotterdam. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters, Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Pregnant women living in Rotterdam who are enrolled in Generation R cohort (analysis sample included 1,282 mother child pairs). Generation R. Enrollment: 2002-2006; Follow-up: Year NR (child 6 years of age).	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during early pregnancy (<18 weeks), mid pregnancy (18-25 weeks), and late pregnancy (>25 weeks).	Linear Regression. Confounders adjusted for: Maternal age, ethnicity, education, income, marital status, alcohol consumption during pregnancy, maternal nonverbal IQ, preppregnancy BMI, parity, smoking during pregnancy, child sex, child age at assessment.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) per 1 log10 unit increase in creatinine-adjusted total high molecular weight phthalate metabolites concentration (ug/g Cr) at <18 weeks of gestation for child nonverbal IQ: -1.98 (-3.82,-0.13). There were significant associations between creatinine adjusted HMWP metabolite concentrations at <18 weeks of gestation and child nonverbal score..	Dries et. al 2020 9387317 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child non-verbal IQ	Health Effect: Reproductive/Developmental-Child nonverbal IQ-Non-cancer-Neurological/Behavioral-Child nonverbal IQ-Non-cancer. Outcome measure: Child nonverbal IQ determined by administering Mosaics and Categories subtests from Snijders-Oomen Nonverbal Intelligence Test Revised (SON-R)	General public, Pregnant people. Middle childhood (6-11). Netherlands; Rotterdam. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters, Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Pregnant women living in Rotterdam who are enrolled in Generation R cohort (analysis sample included 1,282 mother child pairs). Generation R. Enrollment: 2002-2006; Follow-up: Year NR (child 6 years of age).	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during early pregnancy (<18 weeks), mid pregnancy (18-25 weeks), and late pregnancy (>25 weeks).	Linear Regression. Confounders adjusted for: Maternal age, ethnicity, education, income, marital status, alcohol consumption during pregnancy, maternal nonverbal IQ, preppregnancy BMI, parity, smoking during pregnancy, child sex, child age at assessment.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) per 1 log10 unit increase in creatinine-adjusted total high molecular weight phthalate metabolites concentration (ug/g Cr) at <18 weeks of gestation for child nonverbal IQ: -1.98 (-3.82,-0.13). There were significant associations between creatinine adjusted HMWP metabolite concentrations at <18 weeks of gestation and child nonverbal score..	Dries et. al 2020 9387317 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child non-verbal IQ	Health Effect: Reproductive/Developmental-Child nonverbal IQ-Non-cancer-Neurological/Behavioral-Child nonverbal IQ-Non-cancer. Outcome measure: Child nonverbal IQ determined by administering Mosaics and Categories subtests from Snijders-Oomen Nonverbal Intelligence Test Revised (SON-R)	General public, Pregnant people. Middle childhood (6-11). Netherlands; Rotterdam. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters, Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Pregnant women living in Rotterdam who are enrolled in Generation R cohort (analysis sample included 1,282 mother child pairs). Generation R. Enrollment: 2002-2006; Follow-up: Year NR (child 6 years of age).	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during early pregnancy (<18 weeks), mid pregnancy (18-25 weeks), and late pregnancy (>25 weeks).	Linear Regression. Confounders adjusted for: Maternal age, ethnicity, education, income, marital status, alcohol consumption during pregnancy, maternal nonverbal IQ, preppregnancy BMI, parity, smoking during pregnancy, child sex, child age at assessment.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) per 1 log10 unit increase in creatinine-adjusted total high molecular weight phthalate metabolites concentration (ug/g Cr) at <18 weeks of gestation for child nonverbal IQ: -1.98 (-3.82,-0.13). There were significant associations between creatinine adjusted HMWP metabolite concentrations at <18 weeks of gestation and child nonverbal score..	Dries et. al 2020 9387317 Medium

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Child non-verbal IQ	Health Effect: Reproductive/Developmental-Child nonverbal IQ-Non-cancer-Neurological/Behavioral-Child nonverbal IQ-Non-cancer. Outcome measure: Child nonverbal IQ determined by administering Mosaics and Categories subtests from Snijders-Oomen Nonverbal Intelligence Test Revised (SON-R)	General public, Pregnant people. Middle childhood (6-11). Netherlands; Rotterdam. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters, Sociodemographic Status (ex. race/ethnicity, socioeconomic). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Pregnant women living in Rotterdam who are enrolled in Generation R cohort (analysis sample included 1,282 mother child pairs). Generation R. Enrollment: 2002-2006; Follow-up: Year NR (child 6 years of age).	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during early pregnancy (<18 weeks), mid pregnancy (18-25 weeks), and late pregnancy (>25 weeks).	Linear Regression. Confounders adjusted for: Maternal age, ethnicity, education, income, marital status, alcohol consumption during pregnancy, maternal nonverbal IQ, preppregnancy BMI, parity, smoking during pregnancy, child sex, child age at assessment.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) per 1 log10 unit increase in creatinine-adjusted total DEHP metabolites concentration (ug/g Cr) at <18 weeks of gestation for child nonverbal IQ: -1.89 (-3.69,-0.09). There were significant associations between creatinine adjusted DEHP metabolite concentrations at <18 weeks of gestation and child nonverbal score..	Dries et. al 2020 9387317 Medium

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Wheeze	Health Effect: Lung/Respiratory-Asthma, wheeze-Non-cancer-Immune/Hematological-Asthma, wheeze-Non-cancer. Outcome measure: Questionnaire	General public, Pregnant people. Middle childhood (6-11), Adults (18+). Unied States; New York City, New York. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years). Children whose mothers had reported phthalate exposure (Mother-infant pairs enrolled with available phthalate data n=382; Follow-up n=165). Mount Sinai Children's Environmental Health Study. Recruitment: 1998-2002; Follow-up: 2004-2009.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured via biomonitoring during the third trimester of pregnancy.	Logistic Regression. Confounders adjusted for: sociodemographics (maternal age, race/ethnicity, pre-pregnancy body mass index (BMI), education, marital status), residential characteristics (type of residence, number of occupants, pets), predictors of asthma, wheeze, and atopic skin conditions (maternal smoking during pregnancy, persons in the household with asthma, persons in the household with allergies, child's sex, age at follow-up), and creatinine.	Lowest exposure concentration for a significant adverse health outcome response: continuous; median (25th-75th) = 34 ug/L (14-84). OR (95% CI) per 1-sd change from the mean (122 ug/L) among girls: 0.40 (0.18, 0.87). Significant negative association for wheeze among girls exposed to MnBP. The association was also negative for boys and the overall sample but not significant.Nonsignificant associations for asthma and emergency room visits because of asthma..	Buckley et. al 2018 4728666 Medium
Age at pubertal onset	Health Effect: Reproductive/Developmental-age at pubertal onset (as measured by testicular volume, genitalia Tanner stage, and pubarche Tanner stage_-Non-cancer. Outcome measure: Clinical examinations	General public. Teens (12-17), Adults (18+). Russia; Chapaevsk. Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Adolescents (age 11 years through < 21 years). 304 boys recruited at ages 8-9 for the Russia Children's Study,. Russia Children's Study. Recruitment: 2003-2005; Follow-up to 18-19 years.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured prepubertally at ages 8-9.	Interval-censored model. Confounders adjusted for: prenatal maternal alcohol intake, urinary specific gravity.	Lowest exposure concentration for a significant adverse health outcome response: 0.72–1.07 umol/L. Testicular volume >3mLMean shift in months (95% CI):Q3 vs. Q1: 8.0 (2.9, 13.2)p-trend = 0.72Genitalia stage >= 2Mean shift in months (95% CI):Q3 vs. Q1: 8.3 (1.8, 14.7)p-trend = 0.19Pubarche stage >= 2Mean shift in months (95% CI):Q2 vs. Q1: 8.4 (1.6, 15.3)Q3 vs. Q1: 14.1 (7.0, 21.1)Q4 vs. Q1: 10.0 (2.5, 17.4)p-trend = 0.006. For pubarche stage >=2, all quartiles of DEHP metabolites were associated with later pubertal onset. For testicular volume and genitalia stage, pubertal onset was later only for the 3rd quartile of exposure..	Burns et. al 2022 10294569 Medium

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Metabolite: Sum DEHP metabolites [Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP); Mono-(2-ethyl-5-carboxypentyl)phthalate (MECPP)]
Diethylhexyl Phthalate

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Age at pubertal onset	Health Effect: Reproductive/Developmental-age at pubertal onset (as measured by testicular volume, genitalia Tanner stage, and pubarche Tanner stage_-Non-cancer. Outcome measure: Clinical examinations	General public. Teens (12-17), Adults (18+). Russia; Chapaevsk. Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Adolescents (age 11 years through < 21 years). 304 boys recruited at ages 8-9 for the Russia Children's Study,. Russia Children's Study. Recruitment: 2003-2005; Follow-up to 18-19 years.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured prepubertally at ages 8-9.	Interval-censored model. Confounders adjusted for: prenatal tobacco smoke exposure, mother's age at son's birth, breastfed, biological father living in home, and urinary specific gravity.	Lowest exposure concentration for a significant adverse health outcome response: 7.2-13.1 ng/mL. Pubarche stage >= 2 for MEHPMean shift in months (95% CI):Q2 vs. Q1: 7.2 (0.5, 13.9)Q3 vs. Q1: 10.9 (4.0, 17.7)Q4 vs. Q1: 10.6 (3.6, 17.6)p-trend = 0.003. All quartiles of MEHP were associated with later pubertal onset when measured by pubarche stage. Positive, non-significant results for other measures of pubertal onset..	Burns et. al 2022 10294569 Medium
Age at pubertal onset	Health Effect: Reproductive/Developmental-age at pubertal onset (as measured by testicular volume, genitalia Tanner stage, and pubarche Tanner stage_-Non-cancer. Outcome measure: Clinical examinations	General public. Teens (12-17), Adults (18+). Russia; Chapaevsk. Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Adolescents (age 11 years through < 21 years). 304 boys recruited at ages 8-9 for the Russia Children's Study,. Russia Children's Study. Recruitment: 2003-2005; Follow-up to 18-19 years.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured prepubertally at ages 8-9.	Interval-censored model. Confounders adjusted for: prenatal tobacco smoke exposure, mother's age at son's birth, breastfed, biological father living in home, and urinary specific gravity.	Lowest exposure concentration for a significant adverse health outcome response: 51.0-78.9 ng/mL. Genitalia stage >= 2 for MEHHPMean shift in months (95% CI):Q3 vs. Q1: 7.4 (1.0, 13.9)p-trend = 0.59Pubarche stage >= 2 for MEHHPMean shift in months (95% CI):Q2 vs. Q1: 9.7 (2.9, 16.4)Q3 vs. Q1: 8.7 (1.6, 15.9)p-trend = 0.18. Later pubertal onset was associated with Q3 of MEHHP exposure when measured by genitalia stage and pubarche stage. Q2 of MEHHP exposure was also associated with later onset for pubarche stage. No significant results when pubertal onset was measured by testicular volume..	Burns et. al 2022 10294569 Medium

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Metabolite: Sum DEHP metabolites [Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP); Mono-(2-ethyl-5-carboxypentyl)phthalate (MECPP)]
Diethylhexyl Phthalate

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Age at pubertal onset	Health Effect: Reproductive/Developmental-age at pubertal onset (as measured by testicular volume, genitalia Tanner stage, and pubarche Tanner stage_-Non-cancer. Outcome measure: Clinical examinations	General public. Teens (12-17), Adults (18+). Russia; Chapaevsk. Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Adolescents (age 11 years through < 21 years). 304 boys recruited at ages 8-9 for the Russia Children's Study,. Russia Children's Study. Recruitment: 2003-2005; Follow-up to 18-19 years.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured prepubertally at ages 8-9.	Interval-censored model. Confounders adjusted for: prenatal maternal alcohol intake, urinary specific gravity.	Lowest exposure concentration for a significant adverse health outcome response: 6.13–15.11 ng/mL. Testicular volume >3mLMean shift in months (95% CI):Q3 vs. Q1: 5.6 (0.3, 11.0)Q4 vs. Q1: 5.6 (0.6, 10.7)p-trend = 0.006Genitalia stage >= 2Mean shift in months (95% CI):Q4 vs. Q1: 7.5 (1.1, 13.8)p-trend = 0.02Pubarche stage >= 2Mean shift in months (95% CI):Q3 vs. Q1: 15.1 (8.0 - 22.2)Q4 vs. Q1: 14.2 (7.4 - 21.0)p-trend < 0.001. Later pubertal onset was associated with the fourth quartile of MBzP exposure when measured by testicular volume, genitalia stage, or pubarche stage. The same results were found for the 3rd quartile of MBzP when measured by testicular volume and pubarche stage..	Burns et. al 2022 10294569 Medium
Age at pubertal onset	Health Effect: Reproductive/Developmental-age at pubertal onset (as measured by testicular volume, genitalia Tanner stage, and pubarche Tanner stage_-Non-cancer. Outcome measure: Clinical examinations	General public. Teens (12-17), Adults (18+). Russia; Chapaevsk. Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Adolescents (age 11 years through < 21 years). 304 boys recruited at ages 8-9 for the Russia Children's Study,. Russia Children's Study. Recruitment: 2003-2005; Follow-up to 18-19 years.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured prepubertally at ages 8-9.	Interval-censored model. Confounders adjusted for: prenatal maternal alcohol intake, urinary specific gravity.	Lowest exposure concentration for a significant adverse health outcome response: 34.3–56.9 ng/mL. Testicular volume >3mLQ2 vs. Q1: 8.5 (3.7, 13.5)Q3 vs. Q1: 6.4 (1,1, 11.7)Q4 vs. Q1: 5.7 (0.2, 11.1)p-trend = 0.13Genitalia stage >= 2Mean shift in months (95% CI):Q2 vs. Q1: 6.4 (0.2, 12.6)Q3 vs. Q1: 7.2 (0.5, 13.0)p-trend = 0.11Pubarche stage >= 2Mean shift in months (95% CI):Q3 vs. Q1: 10.2 (2.9, 17.5)Q4 vs. Q1: 12.8 (5.3, 20.3)p-trend < 0.001. Later pubertal onset was associated with Q3 of MiBP exposure for all measures of puberty..	Burns et. al 2022 10294569 Medium

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Metabolite: Sum DEHP metabolites [Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP); Mono-(2-ethyl-5-carboxypentyl)phthalate (MECPP)]
Diethylhexyl Phthalate

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Age at pubertal onset	Health Effect: Reproductive/Developmental-age at pubertal onset (as measured by testicular volume, genitalia Tanner stage, and pubarche Tanner stage_-Non-cancer. Outcome measure: Clinical examinations	General public. Teens (12-17), Adults (18+). Russia; Chapaevsk. Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Adolescents (age 11 years through < 21 years). 304 boys recruited at ages 8-9 for the Russia Children's Study,. Russia Children's Study. Recruitment: 2003-2005; Follow-up to 18-19 years.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured prepubertally at ages 8-9.	Interval-censored model. Confounders adjusted for: prenatal maternal alcohol intake, urinary specific gravity.	Lowest exposure concentration for a significant adverse health outcome response: 299.9–1349.3 ng/mL. Pubarche stage >= 2Mean shift in months (95% CI):Q4 vs. Q1: 9.3 (1.5, 17.1)p-trend = 0.03. Later pubertal onset was associated with the 4th quartile of MBP exposure when measured by pubarche stage. Other quartiles were positive, non-significant and the trend test was significant. No significant results for other measures of pubertal onset..	Burns et. al 2022 10294569 Medium
Age at pubertal onset	Health Effect: Reproductive/Developmental-age at pubertal onset (as measured by testicular volume, genitalia Tanner stage, and pubarche Tanner stage_-Non-cancer. Outcome measure: Clinical examinations	General public. Teens (12-17), Adults (18+). Russia; Chapaevsk. Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Adolescents (age 11 years through < 21 years). 304 boys recruited at ages 8-9 for the Russia Children's Study,. Russia Children's Study. Recruitment: 2003-2005; Follow-up to 18-19 years.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured prepubertally at ages 8-9.	Interval-censored model. Confounders adjusted for: prenatal tobacco smoke exposure, mother's age at son's birth, breastfed, biological father living in home, and urinary specific gravity.	Lowest exposure concentration for a significant adverse health outcome response: 41.6-65.9 ng/mL. Genitalia stage >= 2 MEOHPMean shift in months (95% CI):Q3 vs. Q1: 6.9 (0.4, 13.3)p-trend = 0.35Pubarche stage >= 2 for MEOHPMean shift in months (95% CI):Q2 vs. Q1: 8.0 (1.0, 14.9)Q3 vs. Q1: 9.1 (2.0, 16.3)Q4 vs. Q1: 9.9 (2.4, 17.5)p-trend = 0.02. Later pubertal onset was associated with all quartiles of MEOHP exposure when measured by pubarche stage, and with Q3 of MEOHP exposure when measured by genitalia stage. No significant results for testicular volume..	Burns et. al 2022 10294569 Medium

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Metabolite: Sum DEHP metabolites [Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP); Mono-(2-ethyl-5-carboxypentyl)phthalate (MECPP)]
Diethylhexyl Phthalate

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Age at pubertal onset	Health Effect: Reproductive/Developmental-age at pubertal onset (as measured by testicular volume, genitalia Tanner stage, and pubarche Tanner stage_-Non-cancer. Outcome measure: Clinical examinations	General public. Teens (12-17), Adults (18+). Russia; Chapaevsk. Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Adolescents (age 11 years through < 21 years). 304 boys recruited at ages 8-9 for the Russia Children's Study,. Russia Children's Study. Recruitment: 2003-2005; Follow-up to 18-19 years.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured prepubertally at ages 8-9.	Interval-censored model. Confounders adjusted for: prenatal tobacco smoke exposure, mother's age at son's birth, breastfed, biological father living in home, and urinary specific gravity.	Lowest exposure concentration for a significant adverse health outcome response: 104.0-159.9 ng/mL. Testicular volume >3mL MECPPMean shift in months (95% CI):Q3 vs. Q1: 6.5 (1.4, 11.7)p-trend = 0.29Pubarche stage >= 2 for MECPPMean shift in months (95% CI):Q2 vs. Q1: 8.6 (1.8, 15.3)Q3 vs. Q1: 14.3 (7.3, 21,3)Q4 vs. Q1: 10.7 (3.4, 18.1)p-trend = 0.002. Later pubertal onset was associated with all quartiles of MECPP exposure when measured by pubarche stage, and with Q3 of MECPP exposure when measured by testicular volume. No significant results for genitalia stage..	Burns et. al 2022 10294569 Medium
Significant ADHD-related behavior problems	Health Effect: Neurological/Behavioral-Attention Deficit-Hyperactivity Disorder (ADHD) related behaviors-Non-cancer. Outcome measure: Questionnaire: Parent, teacher and self-reported indices using the Behavior Assessment System for Children (BASC-2) Conners Attention Deficit Scale (CADS) checklists	General public, Fenceline communities. Teens (12-17). United States; New Bedford, MA. Female, Male. Cross-Sectional. PESS: Lifestage , Geography/Site-specifi c (ex. home near exposure source or downstream of release sites). Lifestage PESS: Adolescents (age 11 years through < 21 years). 205 adolescents born in New Bedford, MA near a superfund site. New Bedford Cohort. Age 15-year follow-up visit: 2011-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured concurrently with outcome.	Poisson Regression. Confounders adjusted for: child sex, race/ethnicity, mean test age, specific gravity; maternal age, income, education, marital status, smoking during pregnancy; test indicator.	Lowest exposure concentration for a significant adverse health outcome response: Continuous Median (IQR): ∑DEHP metabolites, umol/L = 0.13 (0.08, 0.19). RR (95% CI) for risk of significant ADHD related behavior problems per unit increase in log2-transformed exposure ∑DEHP: All participants-Combined ADHD = 1.29 (1.07-1.55)-Attention problems = 1.29 (1.03-1.60)-Hyperactivity problems = 1.27 (1.06-1.52)∑DEHP: Combined ADHD -Males = 1.62 (1.38, 1.91)-Females = 1.06 (0.85, 1.33) (sex interaction p<0.05). The sum of DEHP metabolites was associated with significant increases in the risk of having significant ADHD-related behavior problems, particularly in boys..	Shoaff et. al 2020 9419487 Medium

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Metabolite: Sum DEHP metabolites [Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP); Mono-(2-ethyl-5-carboxypentyl)phthalate (MECPP)]
Diethylhexyl Phthalate

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Significant ADHD-related behavior problems	Health Effect: Neurological/Behavioral-Attention Deficit-Hyperactivity Disorder (ADHD) related behaviors-Non-cancer. Outcome measure: Questionnaire: Parent, teacher and self-reported indices using the Behavior Assessment System for Children (BASC-2) Conners Attention Deficit Scale (CADS) checklists	General public, Fenceline communities. Teens (12-17). United States; New Bedford, MA. Female, Male. Cross-Sectional. PESS: Lifestage , Geography/Site-specifi c (ex. home near exposure source or downstream of release sites). Lifestage PESS: Adolescents (age 11 years through < 21 years). 205 adolescents born in New Bedford, MA near a superfund site. New Bedford Cohort. Age 15-year follow-up visit: 2011-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured concurrently with outcome.	Poisson Regression. Confounders adjusted for: child sex, race/ethnicity, mean test age, specific gravity; maternal age, income, education, marital status, smoking during pregnancy; test indicator.	Lowest exposure concentration for a significant adverse health outcome response: Continuous Median (IQR): -MEHHP, ug/L = 10.5 (6.2, 17.4) -MEHP, ug/L = 1.50 (0.70, 3.20) -MEOHP, ug/L = 7.70 (4.80, 11.7) -MECPP, ug/L = 18.5 (11.60, 28.1). RR (95% CI) for risk of significant ADHD related behavior problems per unit increase in log2-transformed exposure -MECPP = 1.27 (1.05, 1.54)-MEHHP = 1.26 (1.06, 1.49)-MEOHP = 1.28 (1.07, 1.53)-MEHP = ns. Several individual DEHP metabolites (MECPP, MEHPP, MEOHP) were positively associated with significant increases in the risk of having significant ADHD-related behavior problems..	Shoaff et. al 2020 9419487 Medium
Significant ADHD-related behavior problems	Health Effect: Neurological/Behavioral-Attention Deficit-Hyperactivity Disorder (ADHD) related behaviors-Non-cancer. Outcome measure: Questionnaire: Parent, teacher and self-reported indices using the Behavior Assessment System for Children (BASC-2) Conners Attention Deficit Scale (CADS) checklists	General public, Fenceline communities. Teens (12-17). United States; New Bedford, MA. Female, Male. Cross-Sectional. PESS: Lifestage , Geography/Site-specifi c (ex. home near exposure source or downstream of release sites). Lifestage PESS: Adolescents (age 11 years through < 21 years). 205 adolescents born in New Bedford, MA near a superfund site. New Bedford Cohort. Age 15-year follow-up visit: 2011-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured concurrently with outcome.	Poisson Regression. Confounders adjusted for: child sex, race/ethnicity, mean test age, specific gravity; maternal age, income, education, marital status, smoking during pregnancy; test indicator.	Lowest exposure concentration for a significant adverse health outcome response: Continuous Median (IQR): -MBP, ug/L = 16.0 (8.5. 24.3) -MHBP, ug/L = 1.50 (0.70, 2.85). RR (95% CI) for risk of significant ADHD related behavior problems per unit increase in log2-transformed exposure -MBP= 1.45 (1.15, 1.84)-MHBP= 1.25 (1.03, 1.51). Two DBP metabolites (MBP and MHBP) were positively associated with significant increases in the risk of having significant ADHD-related behavior problems..	Shoaff et. al 2020 9419487 Medium

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Metabolite: Sum DEHP metabolites [Mono-ethylhexyl phthalate (MEHP); Mono-(2-ethyl-5-oxohexyl)phthalate (MEOHP); Mono-(2-ethyl-5-hydroxyhexyl)phthalate (MEHHP); Mono-(2-ethyl-5-carboxypentyl)phthalate (MECPP)]
Diethylhexyl Phthalate

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Significant ADHD-related behavior problems	Health Effect: Neurological/Behavioral-Attention Deficit-Hyperactivity Disorder (ADHD) related behaviors-Non-cancer. Outcome measure: Questionnaire: Parent, teacher and self-reported indices using the Behavior Assessment System for Children (BASC-2) Conners Attention Deficit Scale (CADS) checklists	General public, Fenceline communities. Teens (12-17). United States; New Bedford, MA. Female, Male. Cross-Sectional. PESS: Lifestage , Geography/Site-specifi c (ex. home near exposure source or downstream of release sites). Lifestage PESS: Adolescents (age 11 years through < 21 years). 205 adolescents born in New Bedford, MA near a superfund site. New Bedford Cohort. Age 15-year follow-up visit: 2011-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured concurrently with outcome.	Poisson Regression. Confounders adjusted for: child sex, race/ethnicity, mean test age, specific gravity; maternal age, income, education, marital status, smoking during pregnancy; test indicator.	Lowest exposure concentration for a significant adverse health outcome response: Continuous Median (IQR): -MiBP, ug/L = 11.5 (6.6, 19.3) -MHiBP, ug/L = 4.0 (2.3, 7.3). RR (95% CI) for risk of significant ADHD related behavior problems per unit increase in log2-transformed exposure -MiBP= 1.32 (1.07, 1.64)-MHiBP= ns. DiBP metabolite MiBP was positively and significantly associated with increased risk of having significant ADHD-related behavior problems. The association with MHiBP was also positive but marginally non-significant..	Shoaff et. al 2020 9419487 Medium
Significant ADHD-related behavior problems	Health Effect: Neurological/Behavioral-Attention Deficit-Hyperactivity Disorder (ADHD) related behaviors-Non-cancer. Outcome measure: Questionnaire: Parent, teacher and self-reported indices using the Behavior Assessment System for Children (BASC-2) Conners Attention Deficit Scale (CADS) checklists	General public, Fenceline communities. Teens (12-17). United States; New Bedford, MA. Female, Male. Cross-Sectional. PESS: Lifestage , Geography/Site-specifi c (ex. home near exposure source or downstream of release sites). Lifestage PESS: Adolescents (age 11 years through < 21 years). 205 adolescents born in New Bedford, MA near a superfund site. New Bedford Cohort. Age 15-year follow-up visit: 2011-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured concurrently with outcome.	Poisson Regression. Confounders adjusted for: child sex, race/ethnicity, mean test age, specific gravity; maternal age, income, education, marital status, smoking during pregnancy; test indicator.	Lowest exposure concentration for a significant adverse health outcome response: Continuous Median (IQR): -MBzP, ug/L = 9.3 (4.5, 17.8). RR (95% CI) for risk of significant ADHD related behavior problems per unit increase in log2-transformed exposure -MBzP= 1.22 (1.05, 1.42). BBP metabolite MBzP was positively and significantly associated with increased risk of having significant ADHD-related behavior problems..	Shoaff et. al 2020 9419487 Medium