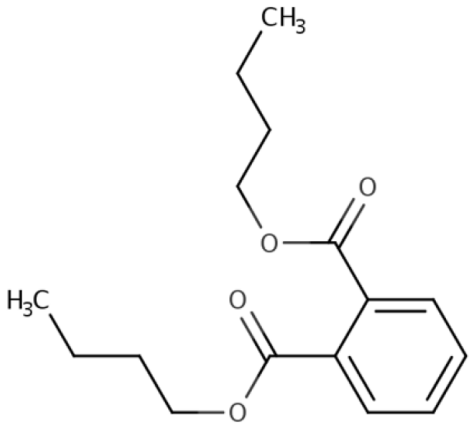
United States
Environmental Protection Agency

May 2025
Office of Chemical Safety and
Pollution Prevention

Data Extraction Information for Environmental Hazard and Human Health Hazard Animal Toxicology and Epidemiology for Dibutyl Phthalate (DBP) (1,2-Benzenedicarboxylic acid, 1,2-dibutyl ester)

Systematic Review Support Document for the Draft Risk Evaluation

CASRN: 84-74-2



May 2025

This supplemental file contains information regarding the data extraction results relevant to the *Draft Environmental Hazard Assessment for Dibutyl Phthalate (DBP)* and the *Draft Human Health Hazard Assessment for Dibutyl Phthalate (DBP)*. EPA used the TSCA systematic review process described in the *Draft Systematic Review Protocol Supporting TSCA Risk Evaluations for Chemical Substances* (referred to hereafter 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 Dibutyl Phthalate (DBP) – 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 DBP, toxicity data gaps were identified for mammalian wildlife relevant to the terrestrial compartment of the environmental hazard assessment. This table includes rodent data for DBP, 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 key references identified by EPA as described in the *Draft Risk Evaluation for Dibutyl Phthalate (DBP) – 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 Dibutyl Phthalate (DBP) – 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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Dibutyl Phthalate

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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
84-74-2	1 Day(s), (6 Day(s))	*Carassius auratus* (Goldfish), Adult, Both, Laboratory (FROM INSTITUTE OF ENVIRONMENT AND ECOLOGY, SHANDONG NORMAL UNIVERSITY, CHINA REARED FOR 3 GENERATIONS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 mg/L / 0.003 mg/L	Behavior (Behavior-Behavioral changes, general, Response Site: Not reported)	NOEC (0.003 mg/L)	Behavioral	Medium	5673506
84-74-2	2 Day(s), (6 Day(s))	*Carassius auratus* (Goldfish), Adult, Both, Laboratory (FROM INSTITUTE OF ENVIRONMENT AND ECOLOGY, SHANDONG NORMAL UNIVERSITY, CHINA REARED FOR 3 GENERATIONS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 mg/L / 0.003 mg/L	Behavior (Behavior-Behavioral changes, general, Response Site: Not reported)	NOEC (0.003 mg/L)	Behavioral	Medium	5673506
84-74-2	2 Day(s), (6 Day(s))	*Carassius auratus* (Goldfish), Adult, Both, Laboratory (FROM INSTITUTE OF ENVIRONMENT AND ECOLOGY, SHANDONG NORMAL UNIVERSITY, CHINA REARED FOR 3 GENERATIONS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 mg/L / 0.003 mg/L	Behavior (Behavior-Behavioral changes, general, Response Site: Not reported)	LOEC (0.003 mg/L)	Behavioral	Medium	5673506

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84-74-2	3 Day(s), (6 Day(s))	*Carassius auratus* (Goldfish), Adult, Both, Laboratory (FROM INSTITUTE OF ENVIRONMENT AND ECOLOGY, SHANDONG NORMAL UNIVERSITY, CHINA REARED FOR 3 GENERATIONS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 mg/L / 0.003 mg/L	Behavior (Behavior-Behavioral changes, general, Response Site: Not reported)	LOEC (0.003 mg/L)	Behavioral	Medium	5673506
84-74-2	4 Day(s), (6 Day(s))	*Carassius auratus* (Goldfish), Adult, Both, Laboratory (FROM INSTITUTE OF ENVIRONMENT AND ECOLOGY, SHANDONG NORMAL UNIVERSITY, CHINA REARED FOR 3 GENERATIONS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 mg/L / 0.003 mg/L	Behavior (Behavior-Behavioral changes, general, Response Site: Not reported)	NOEC (0.003 mg/L)	Behavioral	Medium	5673506
84-74-2	4 Day(s), (6 Day(s))	*Carassius auratus* (Goldfish), Adult, Both, Laboratory (FROM INSTITUTE OF ENVIRONMENT AND ECOLOGY, SHANDONG NORMAL UNIVERSITY, CHINA REARED FOR 3 GENERATIONS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 mg/L / 0.003 mg/L	Behavior (Behavior-Behavioral changes, general, Response Site: Not reported)	LOEC (0.003 mg/L)	Behavioral	Medium	5673506

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84-74-2	5 Day(s), (6 Day(s))	*Carassius auratus* (Goldfish), Adult, Both, Laboratory (FROM INSTITUTE OF ENVIRONMENT AND ECOLOGY, SHANDONG NORMAL UNIVERSITY, CHINA REARED FOR 3 GENERATIONS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 mg/L / 0.003 mg/L	Behavior (Behavior-Behavioral changes, general, Response Site: Not reported)	NOEC (0.003 mg/L)	Behavioral	Medium	5673506
84-74-2	5 Day(s), (6 Day(s))	*Carassius auratus* (Goldfish), Adult, Both, Laboratory (FROM INSTITUTE OF ENVIRONMENT AND ECOLOGY, SHANDONG NORMAL UNIVERSITY, CHINA REARED FOR 3 GENERATIONS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 mg/L / 0.003 mg/L	Behavior (Behavior-Behavioral changes, general, Response Site: Not reported)	LOEC (0.003 mg/L)	Behavioral	Medium	5673506
84-74-2	6 Day(s), (6 Day(s))	*Carassius auratus* (Goldfish), Adult, Both, Laboratory (FROM INSTITUTE OF ENVIRONMENT AND ECOLOGY, SHANDONG NORMAL UNIVERSITY, CHINA REARED FOR 3 GENERATIONS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 mg/L / 0.003 mg/L	Behavior (Behavior-Behavioral changes, general, Response Site: Not reported)	NOEC (0.003 mg/L)	Behavioral	Medium	5673506

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84-74-2	6 Day(s), (6 Day(s))	*Carassius auratus* (Goldfish), Adult, Both, Laboratory (FROM INSTITUTE OF ENVIRONMENT AND ECOLOGY, SHANDONG NORMAL UNIVERSITY, CHINA REARED FOR 3 GENERATIONS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 mg/L / 0.003 mg/L	Behavior (Behavior-Behavioral changes, general, Response Site: Not reported)	LOEC (0.003 mg/L)	Behavioral	Medium	5673506
84-74-2	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)	NOEC (0.60 mg/L)	Mortality	High	1321996
84-74-2	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 (>0.60 mg/L)	Mortality	High	1321996
84-74-2	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 / 0.06 (0.04-0.07) ppm / 0.13 (0.07-0.17) ppm / 0.14 (0.12-0.15) ppm / 0.29 (0.14-0.39) ppm / 0.60 (0.43-0.97) ppm	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.60 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
84-74-2	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 / 0.06 (0.04-0.07) ppm / 0.13 (0.07-0.17) ppm / 0.14 (0.12-0.15) ppm / 0.29 (0.14-0.39) ppm / 0.60 (0.43-0.97) ppm	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.60 ppm)	Mortality	High	1316224
84-74-2	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 / 0.06 (0.04-0.07) ppm / 0.13 (0.07-0.17) ppm / 0.14 (0.12-0.15) ppm / 0.29 (0.14-0.39) ppm / 0.60 (0.43-0.97) ppm	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>0.60 ppm)	Mortality	High	1316224
84-74-2	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 / 0.06 (0.04-0.07) ppm / 0.13 (0.07-0.17) ppm / 0.14 (0.12-0.15) ppm / 0.29 (0.14-0.39) ppm / 0.60 (0.43-0.97) ppm	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (0.60 (0.43-0.97) 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
84-74-2	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 / 0.06 (0.04-0.07) ppm / 0.13 (0.07-0.17) ppm / 0.14 (0.12-0.15) ppm / 0.29 (0.14-0.39) ppm / 0.60 (0.43-0.97) ppm	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (0.60 ppm)	Mortality	High	1316224
84-74-2	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	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BAF (100 ppb)	ADME (biotransformation)	Uninformative	789995
84-74-2	4 Hour(s), (96 Hour(s))	*Cyprinus carpio* (Common Carp), Sexually immature, Not Reported, Laboratory (STATE HYDRAULIC WORKS GENERAL DIRECTORATE, YEDIKIR DAM LAKE, TURKEY)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 1 mg/L	Biochemical (Biochemistry-Heat shock protein 70 , Response Site: Liver)	NOEC (1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	3071043

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84-74-2	4 Hour(s), (96 Hour(s))	*Cyprinus carpio* (Common Carp), Sexually immature, Not Reported, Laboratory (STATE HYDRAULIC WORKS GENERAL DIRECTORATE, YEDIKIR DAM LAKE, TURKEY)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 1 mg/L	Cellular (Genetics-HSP70 mRNA, Response Site: Liver)	NOEC (1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	3071043
84-74-2	4 Hour(s), (96 Hour(s))	*Cyprinus carpio* (Common Carp), Sexually immature, Not Reported, Laboratory (STATE HYDRAULIC WORKS GENERAL DIRECTORATE, YEDIKIR DAM LAKE, TURKEY)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 1 mg/L	Cellular (Genetics-HSP70 mRNA, Response Site: Gill(s))	LOEC (1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	3071043
84-74-2	24 Hour(s), (96 Hour(s))	*Cyprinus carpio* (Common Carp), Sexually immature, Not Reported, Laboratory (STATE HYDRAULIC WORKS GENERAL DIRECTORATE, YEDIKIR DAM LAKE, TURKEY)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 1 mg/L	Biochemical (Biochemistry-Heat shock protein 70 , Response Site: Liver)	NOEC (1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	3071043

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84-74-2	24 Hour(s), (96 Hour(s))	*Cyprinus carpio* (Common Carp), Sexually immature, Not Reported, Laboratory (STATE HYDRAULIC WORKS GENERAL DIRECTORATE, YEDIKIR DAM LAKE, TURKEY)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 1 mg/L	Cellular (Genetics-HSP70 mRNA, Response Site: Liver)	LOEC (1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	3071043
84-74-2	24 Hour(s), (96 Hour(s))	*Cyprinus carpio* (Common Carp), Sexually immature, Not Reported, Laboratory (STATE HYDRAULIC WORKS GENERAL DIRECTORATE, YEDIKIR DAM LAKE, TURKEY)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 1 mg/L	Cellular (Genetics-HSP70 mRNA, Response Site: Gill(s))	LOEC (1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	3071043
84-74-2	96 Hour(s), (96 Hour(s))	*Cyprinus carpio* (Common Carp), Sexually immature, Not Reported, Laboratory (STATE HYDRAULIC WORKS GENERAL DIRECTORATE, YEDIKIR DAM LAKE, TURKEY)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 1 mg/L	Cellular (Genetics-HSP70 mRNA, Response Site: Gill(s))	LOEC (1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	3071043

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84-74-2	96 Hour(s), (96 Hour(s))	*Cyprinus carpio* (Common Carp), Sexually immature, Not Reported, Laboratory (STATE HYDRAULIC WORKS GENERAL DIRECTORATE, YEDIKIR DAM LAKE, TURKEY)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 1 mg/L	Cellular (Genetics-HSP70 mRNA, Response Site: Liver)	LOEC (1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	3071043
84-74-2	96 Hour(s), (96 Hour(s))	*Cyprinus carpio* (Common Carp), Sexually immature, Not Reported, Laboratory (STATE HYDRAULIC WORKS GENERAL DIRECTORATE, YEDIKIR DAM LAKE, TURKEY)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 1 mg/L	Biochemical (Biochemistry-Heat shock protein 70 , Response Site: Liver)	NOEC (1 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	3071043
84-74-2	24-96 Hour(s), (96 Hour(s))	*Cyprinus carpio* (Common Carp), Sexually immature, Not Reported, Laboratory (STATE HYDRAULIC WORKS GENERAL DIRECTORATE, YEDIKIR DAM LAKE, TURKEY)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 1 mg/L	Cellular (Histology-Degeneration,Edema,Hyperplasia,Vacuolization, Response Site: Gill(s),Liver)	NR (1 mg/L)	Respiratory	Medium	3071043

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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
84-74-2	24-96 Hour(s), (96 Hour(s))	*Cyprinus carpio* (Common Carp), Sexually immature, Not Reported, Laboratory (STATE HYDRAULIC WORKS GENERAL DIRECTORATE, YEDIKIR DAM LAKE, TURKEY)	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 1 mg/L	Cellular (Histology-Degeneration,Edema,Hyperplasia,Vacuolization, Response Site: Gill(s),Liver)	NR (1 mg/L)	Hepatic/Liver	Medium	3071043
84-74-2	96 Hour(s), (96 Hour(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 5 mg/L / 10 mg/L / 15 mg/L / 20 mg/L / 25 mg/L / 35 mg/L / 40 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (35 mg/L)	Mortality	Uninformative	3974208
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Potassium content, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Glucose, Response Site: Plasma)	NOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Hemoglobin, Response Site: Blood)	NOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Protein content, Response Site: Plasma)	NOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Cellular (Cell(s)-White blood cell count, total, Response Site: Blood)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Potassium content, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Lipid peroxides, Response Site: Liver)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Lipid peroxides, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Chloride, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Liver)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Chloride, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Cellular (Cell(s)-Red blood cell, Response Site: Blood)	NOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Liver)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Sodium potassium ATPase, Response Site: Brain)	NOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Hematocrit (anemia), Response Site: Blood)	NOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Alanine transaminase (ALT), Response Site: Plasma)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Sodium content, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Alanine transaminase (ALT), Response Site: Liver)	NOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Glutamic-oxaloacetic transaminase, Response Site: Liver)	NOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Cellular (Cell(s)-Volume, Response Site: Blood)	NOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Hemoglobin, Response Site: Blood)	NOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Sodium potassium ATPase, Response Site: Brain)	LOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Cholinesterase, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Hemoglobin, Response Site: Blood)	LOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Hematocrit (anemia), Response Site: Blood)	LOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Glutamic-oxaloacetic transaminase, Response Site: Plasma)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Sodium potassium ATPase, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Cellular (Cell(s)-Red blood cell, Response Site: Blood)	LOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	7 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Sodium content, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Lipid peroxides, Response Site: Liver)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Hematocrit (anemia), Response Site: Blood)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Chloride, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Cellular (Cell(s)-Volume, Response Site: Blood)	LOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Chloride, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Alanine transaminase (ALT), Response Site: Liver)	LOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Hemoglobin, Response Site: Blood)	LOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Lipid peroxides, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Potassium content, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Hemoglobin, Response Site: Blood)	NOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Alanine transaminase (ALT), Response Site: Liver)	NOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Cellular (Cell(s)-Volume, Response Site: Blood)	NOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Potassium content, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Glucose, Response Site: Plasma)	NOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Hemoglobin, Response Site: Blood)	NOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Cellular (Cell(s)-Red blood cell, Response Site: Blood)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Liver)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Protein content, Response Site: Plasma)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Sodium content, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Sodium content, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Alanine transaminase (ALT), Response Site: Plasma)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Sodium potassium ATPase, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Sodium potassium ATPase, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Glutamic-oxaloacetic transaminase, Response Site: Plasma)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Cellular (Cell(s)-White blood cell count, total, Response Site: Blood)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Cholinesterase, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Liver)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	14 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Glutamic-oxaloacetic transaminase, Response Site: Liver)	NOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Sodium potassium ATPase, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Hemoglobin, Response Site: Blood)	NOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Cellular (Cell(s)-Volume, Response Site: Blood)	NOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Glutamic-oxaloacetic transaminase, Response Site: Liver)	NOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Alanine transaminase (ALT), Response Site: Liver)	NOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Glucose, Response Site: Plasma)	NOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Hemoglobin, Response Site: Blood)	NOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Glucose, Response Site: Plasma)	LOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Lipid peroxides, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Cholinesterase, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Liver)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Alanine transaminase (ALT), Response Site: Plasma)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Sodium content, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Sodium content, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Protein content, Response Site: Plasma)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Potassium content, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Potassium content, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Lipid peroxides, Response Site: Liver)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Sodium potassium ATPase, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Hematocrit (anemia), Response Site: Blood)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Chloride, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Chloride, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Glutamic-oxaloacetic transaminase, Response Site: Plasma)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Cellular (Cell(s)-Red blood cell, Response Site: Blood)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Cellular (Cell(s)-White blood cell count, total, Response Site: Blood)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Cellular (Cell(s)-Volume, Response Site: Blood)	LOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Liver)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Hemoglobin, Response Site: Blood)	LOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	21 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Hemoglobin, Response Site: Blood)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Chloride, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Chloride, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Cellular (Cell(s)-Volume, Response Site: Blood)	LOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Lipid peroxides, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Lipid peroxides, Response Site: Liver)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Potassium content, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Protein content, Response Site: Plasma)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Sodium content, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Alanine transaminase (ALT), Response Site: Liver)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Alanine transaminase (ALT), Response Site: Plasma)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Liver)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Cholinesterase, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Glutamic-oxaloacetic transaminase, Response Site: Liver)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Glutamic-oxaloacetic transaminase, Response Site: Plasma)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Sodium potassium ATPase, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Cellular (Cell(s)-Volume, Response Site: Blood)	NOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Hemoglobin, Response Site: Blood)	LOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Hemoglobin, Response Site: Blood)	NOEC (3.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Hemoglobin, Response Site: Blood)	NOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Hemoglobin, Response Site: Blood)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Hematocrit (anemia), Response Site: Blood)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Potassium content, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Sodium potassium ATPase, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Liver)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Cellular (Cell(s)-Red blood cell, Response Site: Blood)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Cellular (Cell(s)-White blood cell count, total, Response Site: Blood)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	28 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Glucose, Response Site: Plasma)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Glutamic-oxaloacetic transaminase, Response Site: Liver)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Glutamic-oxaloacetic transaminase, Response Site: Plasma)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Sodium potassium ATPase, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Liver)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Cellular (Cell(s)-Red blood cell, Response Site: Blood)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Cellular (Cell(s)-Volume, Response Site: Blood)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Cellular (Cell(s)-White blood cell count, total, Response Site: Blood)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Sodium potassium ATPase, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Chloride, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Chloride, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Glucose, Response Site: Plasma)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Hematocrit (anemia), Response Site: Blood)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Hemoglobin, Response Site: Blood)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Lipid peroxides, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Lipid peroxides, Response Site: Liver)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Potassium content, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Protein content, Response Site: Plasma)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Sodium content, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Sodium content, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Biochemistry-Potassium content, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Alanine transaminase (ALT), Response Site: Liver)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Alanine transaminase (ALT), Response Site: Plasma)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Liver)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Cholinesterase, Response Site: Brain)	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208
84-74-2	35 Day(s), (35 Day(s))	*Cyprinus carpio* (Common Carp), Fingerling, Not Reported, Laboratory (TAMIL NADU FISHERIES DEVELOPMENT CORPORATION, ALIYAR, TAMIL NADU, INDIA)	Fresh water, Aqueous (aquatic habitat), Renewal, 5 Organism	Unmeasured	0 mg/L / 1.75 mg/L / 3.5 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Gill(s))	LOEC (1.75 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Immune/Hematological; Nutritional and Metabolic	Medium	3974208

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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
84-74-2	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 / 1.63 mg/L / 3.26 mg/L / 8.15 mg/L	Biochemical (Enzyme(s)-Xanthine oxidase, XOD, Response Site: Liver)	LOEC (1.63 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2510817
84-74-2	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 / 1.63 mg/L / 3.26 mg/L / 8.15 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Liver)	LOEC (1.63 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2510817
84-74-2	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 / 1.63 mg/L / 3.26 mg/L / 8.15 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Liver)	LOEC (1.63 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2510817
84-74-2	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 (16.30 (16.21-16.39) 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
84-74-2	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 / 0.815 mg/L / 1.63 mg/L / 4.075 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Liver)	NR (0.815-4.075 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2510817
84-74-2	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 / 0.815 mg/L / 1.63 mg/L / 4.075 mg/L	Biochemical (Enzyme(s)-Xanthine oxidase, XOD, Response Site: Liver)	NR (0.815-4.075 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2510817
84-74-2	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 / 0.815 mg/L / 1.63 mg/L / 4.075 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Liver)	NR (0.815-4.075 mg/L)	Mechanistic: Biomarkers (exposure and effect)	Medium	2510817
84-74-2	70 Day(s), (95 Day(s))	*Danio rerio* (Zebra Danio), Fry, 20 Days post fertilization, Both, Laboratory (LABORATORY OF CHEMICAL GENOMICS, PEKING UNIVERSITY, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 mg/L / ~0.1 mg/L / ~0.4 mg/L	Cellular (Histology-Edema,Histological changes, general,Hypertrophy,Swelling, Response Site: Gill(s),Liver)	NR (~0.1-~0.4 mg/L)	Respiratory	High	2816885

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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
84-74-2	70 Day(s), (95 Day(s))	*Danio rerio* (Zebra Danio), Fry, 20 Days post fertilization, Both, Laboratory (LABORATORY OF CHEMICAL GENOMICS, PEKING UNIVERSITY, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 mg/L / ~0.1 mg/L / ~0.4 mg/L	Cellular (Histology-Edema,Histological changes, general,Hypertrophy,Swelling, Response Site: Gill(s),Liver)	NR (~0.1-~0.4 mg/L)	Hepatic/Liver	High	2816885
84-74-2	95 Day(s), (95 Day(s))	*Danio rerio* (Zebra Danio), Fry, 20 Days post fertilization, Both, Laboratory (LABORATORY OF CHEMICAL GENOMICS, PEKING UNIVERSITY, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Measured	0 mg/L / ~0.1 mg/L / ~0.4 mg/L	Reproduction (Reproduction-Reproduction, general, Response Site: Ovaries,Testes)	NR (~0.1-~0.4 mg/L)	Reproductive/Teratogenic	High	2816885
84-74-2	95 Day(s), (95 Day(s))	*Danio rerio* (Zebra Danio), Fry, 20 Days post fertilization, Both, Laboratory (LABORATORY OF CHEMICAL GENOMICS, PEKING UNIVERSITY, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Measured	0 mg/L / ~0.1 mg/L / ~0.4 mg/L	Population (Population-Sex ratio, Response Site: Not reported)	NOEC (~0.4 mg/L)	Reproductive/Teratogenic	High	2816885
84-74-2	95 Day(s), (95 Day(s))	*Danio rerio* (Zebra Danio), Fry, 20 Days post fertilization, Both, Laboratory (LABORATORY OF CHEMICAL GENOMICS, PEKING UNIVERSITY, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 mg/L / ~0.1 mg/L / ~0.4 mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (~0.4 mg/L)	Development/Growth	High	2816885

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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
84-74-2	95 Day(s), (95 Day(s))	*Danio rerio* (Zebra Danio), Fry, 20 Days post fertilization, Both, Laboratory (LABORATORY OF CHEMICAL GENOMICS, PEKING UNIVERSITY, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 mg/L / ~0.1 mg/L / ~0.4 mg/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (~0.4 mg/L)	Development/Growth	High	2816885
84-74-2	95 Day(s), (95 Day(s))	*Danio rerio* (Zebra Danio), Fry, 20 Days post fertilization, Both, Laboratory (LABORATORY OF CHEMICAL GENOMICS, PEKING UNIVERSITY, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 mg/L / ~0.1 mg/L / ~0.4 mg/L	Growth (Growth-Condition index, Response Site: Whole organism)	NOEC (~0.4 mg/L)	Development/Growth	High	2816885
84-74-2	95 Day(s), (95 Day(s))	*Danio rerio* (Zebra Danio), Fry, 20 Days post fertilization, Both, Laboratory (LABORATORY OF CHEMICAL GENOMICS, PEKING UNIVERSITY, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 mg/L / ~0.1 mg/L / ~0.4 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (~0.4 mg/L)	Mortality	High	2816885
84-74-2	95 Day(s), (95 Day(s))	*Danio rerio* (Zebra Danio), Fry, 20 Days post fertilization, Both, Laboratory (LABORATORY OF CHEMICAL GENOMICS, PEKING UNIVERSITY, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 mg/L / ~0.1 mg/L / ~0.4 mg/L	Biochemical (Biochemistry-Vitellogenin, Response Site: Whole organism)	NOEC (~0.4 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	High	2816885

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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
84-74-2	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)	LC50 (0.63 ppm)	Mortality	Medium	2298079
84-74-2	10 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-CYP19A1 mRNA, Response Site: Not reported)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322

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84-74-2	10 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-CYP19A2 mRNA, Response Site: Not reported)	NOEC (25 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322
84-74-2	6 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-CYP19A2 mRNA, Response Site: Not reported)	NOEC (25 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322

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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
84-74-2	35 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Biochemical (Enzyme(s)-Acyl-CoA oxidase, Response Site: Whole organism)	LOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322
84-74-2	35 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Cell(s)-Density, Response Site: Liver,Peroxisome)	LOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322

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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
84-74-2	35 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Cell(s)-Volume, Response Site: Liver,Peroxisome)	LOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322
84-74-2	35 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-CYP19A1 mRNA, Response Site: Not reported)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322

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84-74-2	35 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-CYP19A2 mRNA, Response Site: Not reported)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322
84-74-2	6 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-CYP19A2 mRNA, Response Site: Not reported)	LOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322

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84-74-2	35 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Not reported)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322
84-74-2	35 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Biochemical (Enzyme(s)-Acyl-CoA oxidase, Response Site: Whole organism)	NOEC (25 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322

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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
84-74-2	35 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Cell(s)-Density, Response Site: Liver,Peroxisome)	NOEC (25 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322
84-74-2	35 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Cell(s)-Volume, Response Site: Liver,Peroxisome)	NOEC (25 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322

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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
84-74-2	4 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Not reported)	NR (25-100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322
84-74-2	4 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-Cyp1A1 mRNA, Response Site: Not reported)	NR (25-100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322

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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
84-74-2	21-35 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, NA Both male and female	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Reproduction (Reproduction-Reproduction, general,Fully developed oocytes, Response Site: Gonad(s),Oocyte,Testes,Whole organism)	NR (25-100 ug/L)	Development/Growth	Medium	676322
84-74-2	6 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Not reported)	NOEC (25 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322

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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
84-74-2	21 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Not reported)	NOEC (25 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322
84-74-2	6 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-Cyp1A1 mRNA, Response Site: Not reported)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322

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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
84-74-2	35 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-Cyp1A1 mRNA, Response Site: Not reported)	NR (25-100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322
84-74-2	4 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-CYP19A1 mRNA, Response Site: Not reported)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322

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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
84-74-2	6 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-CYP19A1 mRNA, Response Site: Not reported)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322
84-74-2	4 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-CYP19A2 mRNA, Response Site: Not reported)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322

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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
84-74-2	10 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-Cyp1A1 mRNA, Response Site: Not reported)	LOEC (25 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322
84-74-2	21 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-CYP19A1 mRNA, Response Site: Not reported)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322

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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
84-74-2	10 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Not reported)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322
84-74-2	21 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Biochemical (Enzyme(s)-Acyl-CoA oxidase, Response Site: Whole organism)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322

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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
84-74-2	21 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-CYP19A2 mRNA, Response Site: Not reported)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322
84-74-2	10 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-CYP19A2 mRNA, Response Site: Not reported)	LOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322

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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
84-74-2	21 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Not reported)	LOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322
84-74-2	21 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-Cyp1A1 mRNA, Response Site: Not reported)	NOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322

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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
84-74-2	6 Days post fertilization, (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Not reported)	LOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322
84-74-2	10 Day(s), (10 Day(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10-5000 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (100 ug/L)	Mortality	Medium	676322

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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
84-74-2	18 Day(s), (45 Day(s))	*Danio rerio* (Zebra Danio), Adult, 5-6 Month(s) (Measured in: female, 1st generation), Female, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, NA female, 1st generation	Unmeasured	0 ug/L / 100 ug/L / 500 ug/L	Cellular (Genetics-Cyp1A1 mRNA, Response Site: Liver)	LOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322
84-74-2	18 Day(s), (45 Day(s))	*Danio rerio* (Zebra Danio), Adult, 5-6 Month(s) (Measured in: female, 1st generation), Female, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, NA female, 1st generation	Unmeasured	0 ug/L / 100 ug/L / 500 ug/L	Cellular (Genetics-CYP19A2 mRNA, Response Site: Brain)	NR (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322

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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
84-74-2	18 Day(s), (45 Day(s))	*Danio rerio* (Zebra Danio), Adult, 5-6 Month(s) (Measured in: female, 1st generation), Female, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, NA female, 1st generation	Unmeasured	0 ug/L / 100 ug/L / 500 ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Liver)	NOEC (500 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322
84-74-2	18 Day(s), (45 Day(s))	*Danio rerio* (Zebra Danio), Adult, 5-6 Month(s) (Measured in: female, 1st generation), Female, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, NA female, 1st generation	Unmeasured	0 ug/L / 100 ug/L / 500 ug/L	Biochemical (Biochemistry-Vitellogenin, Response Site: Liver)	NOEC (500 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322

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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
84-74-2	18 Day(s), (45 Day(s))	*Danio rerio* (Zebra Danio), Adult, 5-6 Month(s) (Measured in: female, 1st generation), Female, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, NA female, 1st generation	Unmeasured	0 ug/L / 100 ug/L / 500 ug/L	Cellular (Genetics-CYP19A1 mRNA, Response Site: Ovaries)	LOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322
84-74-2	18 Day(s), (45 Day(s))	*Danio rerio* (Zebra Danio), Adult, 5-6 Month(s) (Measured in: female, 1st generation), Female, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, NA female, 1st generation	Unmeasured	0 ug/L / 100 ug/L / 500 ug/L	Reproduction (Reproduction-Reproduction, general,Fully developed oocytes, Response Site: Liver,Ovaries)	NR (100-500 ug/L)	Reproductive/Teratogenic	Medium	676322

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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
84-74-2	18 Day(s), (45 Day(s))	*Danio rerio* (Zebra Danio), Adult, 5-6 Month(s) (Measured in: female, 1st generation), Female, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, NA female, 1st generation	Unmeasured	0 ug/L / 100 ug/L / 500 ug/L	Biochemical (Enzyme(s)-Acyl-CoA oxidase, Response Site: Liver)	LOEC (100 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology)	High	676322
84-74-2	5 Week(s), (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (100 ug/L)	Mortality	Medium	676322

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84-74-2	5 Week(s), (5 Week(s))	*Danio rerio* (Zebra Danio), Egg, >1-<2 Hours post fertilization, Not Reported, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 25 ug/L / 100 ug/L	Growth (Development-Abnormal, Response Site: Not reported)	NR (25-100 ug/L)	Development/Growth	Medium	676322
84-74-2	43 Day(s), (45 Day(s))	*Danio rerio* (Zebra Danio), Adult, 5-6 Month(s) (Measured in: F1 generation), Female, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, NA F1 generation	Unmeasured	0 ug/L / 100 ug/L / 500 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEC (100 ug/L)	Mortality	Medium	676322

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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
84-74-2	18-45 Day(s), (45 Day(s))	*Danio rerio* (Zebra Danio), Adult, 5-6 Month(s) (Measured in: female, 1st generation), Female, Laboratory (ZEBRAFISH FACILITY AT THE CENTER OF MARINE BIOTECHNOLOGY (UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, BALTIMORE, MD, USA))	Fresh water, Aqueous (aquatic habitat), Renewal, NA female, 1st generation	Unmeasured	0 ug/L / 100 ug/L / 500 ug/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (500 ug/L)	Reproductive/Teratogenic	Medium	676322
84-74-2	22 Day(s), (22 Day(s))	*Gasterosteus aculeatus* (Threespine Stickleback), Adult, Male, Wild (OBTAINED FROM A SERIES OF PONDS NEAR HOOK, HAMPSHIRE, UNITED KINGDOM)	Fresh water, Aqueous (aquatic habitat), Flow-through, 8 Male organisms	Measured	0 ug/L / 15.23 ug/L / 35.20 ug/L	Biochemical (Biochemistry-Spiggin, Response Site: Kidney)	LOEC (35.20 ug/L)	Mechanistic: Biomarkers (exposure and effect); Endocrine toxicity; Reproductive/Teratogenic	Medium	788294
84-74-2	22 Day(s), (22 Day(s))	*Gasterosteus aculeatus* (Threespine Stickleback), Adult, Male, Wild (OBTAINED FROM A SERIES OF PONDS NEAR HOOK, HAMPSHIRE, UNITED KINGDOM)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 ug/L / 15.23 ug/L / 35.20 ug/L	Cellular (Genetics-3B-Hydroxysteroid dehydrogenase mRNA, Response Site: Testes)	NOEC (35.20 ug/L)	Mechanistic: Biomarkers (exposure and effect); Endocrine toxicity; Reproductive/Teratogenic	Medium	788294

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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
84-74-2	22 Day(s), (22 Day(s))	*Gasterosteus aculeatus* (Three-spine Stickle-back), Adult, Male, Wild (OB-TAINED FROM A SERIES OF PONDS NEAR HOOK, HAMP-SHIRE, UNITED KINGDOM)	Fresh water, Aque-ous (aquatic habi-tat), Flow-through, Not Reported	Measured	0 ug/L / 15.23 ug/L / 35.20 ug/L	Cellular (Genetics-Steroidogenic Acute Regulatory protein mRNA, Response Site: Testes)	NOEC (35.20 ug/L)	Mechanistic: Biomarkers (exposure and effect); Endocrine toxic-ity; Reproductive/Teratogenic	Medium	788294
84-74-2	22 Day(s), (22 Day(s))	*Gasterosteus aculeatus* (Three-spine Stickle-back), Adult, Male, Wild (OB-TAINED FROM A SERIES OF PONDS NEAR HOOK, HAMP-SHIRE, UNITED KINGDOM)	Fresh water, Aque-ous (aquatic habi-tat), Flow-through, Not Reported	Measured	0 ug/L / 15.23 ug/L / 35.20 ug/L	Cellular (Genetics-beta-Actin mRNA, Response Site: Testes)	NOEC (35.20 ug/L)	Mechanistic: Biomarkers (exposure and effect); Endocrine toxic-ity; Reproductive/Teratogenic	Medium	788294
84-74-2	22 Day(s), (22 Day(s))	*Gasterosteus aculeatus* (Three-spine Stickle-back), Adult, Male, Wild (OB-TAINED FROM A SERIES OF PONDS NEAR HOOK, HAMP-SHIRE, UNITED KINGDOM)	Fresh water, Aque-ous (aquatic habi-tat), Flow-through, 8 Male organisms	Measured	0 ug/L / 15.23 ug/L / 35.20 ug/L	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEC (15.23 ug/L)	Mechanistic: Biomarkers (exposure and effect); Endocrine toxic-ity; Reproductive/Teratogenic	Medium	788294
84-74-2	22 Day(s), (22 Day(s))	*Gasterosteus aculeatus* (Three-spine Stickle-back), Adult, Male, Wild (OB-TAINED FROM A SERIES OF PONDS NEAR HOOK, HAMP-SHIRE, UNITED KINGDOM)	Fresh water, Aque-ous (aquatic habi-tat), Flow-through, 8 Male organisms	Measured	0 ug/L / 15.23 ug/L / 35.20 ug/L	Biochemical (Hormone(s)-11-Ketotestosterone, Response Site: Plasma)	NOEC (35.20 ug/L)	Mechanistic: Biomarkers (exposure and effect); Endocrine toxic-ity; Reproductive/Teratogenic	Medium	788294

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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
84-74-2	22 Day(s), (22 Day(s))	*Gasterosteus aculeatus* (Three-spine Stickle-back), Adult, Male, Wild (OB-TAINED FROM A SERIES OF PONDS NEAR HOOK, HAMP-SHIRE, UNITED KINGDOM)	Fresh water, Aque-ous (aquatic habi-tat), Flow-through, Not Reported	Measured	0 ug/L / 15.23 ug/L / 35.20 ug/L	Growth (Growth-Length, Response Site: Whole or-ganism)	NOEC (35.20 ug/L)	Develop-ment/Growth	Medium	788294
84-74-2	22 Day(s), (22 Day(s))	*Gasterosteus aculeatus* (Three-spine Stickle-back), Adult, Male, Wild (OB-TAINED FROM A SERIES OF PONDS NEAR HOOK, HAMP-SHIRE, UNITED KINGDOM)	Fresh water, Aque-ous (aquatic habi-tat), Flow-through, Not Reported	Measured	0 ug/L / 15.23 ug/L / 35.20 ug/L	Growth (Growth-Weight, Response Site: Whole or-ganism)	NOEC (35.20 ug/L)	Develop-ment/Growth	Medium	788294
84-74-2	22 Day(s), (22 Day(s))	*Gasterosteus aculeatus* (Three-spine Stickle-back), Adult, Male, Wild (OB-TAINED FROM A SERIES OF PONDS NEAR HOOK, HAMP-SHIRE, UNITED KINGDOM)	Fresh water, Aque-ous (aquatic habi-tat), Flow-through, Not Reported	Measured	0 ug/L / 15.23 ug/L / 35.20 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Gonad(s))	NOEC (35.20 ug/L)	Develop-ment/Growth	Medium	788294
84-74-2	22 Day(s), (22 Day(s))	*Gasterosteus aculeatus* (Three-spine Stickle-back), Adult, Male, Wild (OB-TAINED FROM A SERIES OF PONDS NEAR HOOK, HAMP-SHIRE, UNITED KINGDOM)	Fresh water, Aque-ous (aquatic habi-tat), Flow-through, 8 Male organisms	Measured	0 ug/L / 15.23 ug/L / 35.20 ug/L	Reproduction (Reproduction-Pair bonding nesting behavior, Response Site: Not reported)	NOEC (35.20 ug/L)	Behavioral	Medium	788294

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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
84-74-2	22 Day(s), (22 Day(s))	*Gasterosteus aculeatus* (Three-spine Stickle-back), Adult, Male, Wild (OB-TAINED FROM A SERIES OF PONDS NEAR HOOK, HAMP-SHIRE, UNITED KINGDOM)	Fresh water, Aque-ous (aquatic habi-tat), Flow-through, 8 Male organisms	Measured	0 ug/L / 15.23 ug/L / 35.20 ug/L	Biochemical (Biochemistry-Spiggin, Response Site: Kidney)	NOEC (15.23 ug/L)	Mechanistic: Biomarkers (exposure and effect); Endocrine toxic-ity; Reproductive/Teratogenic	Medium	788294
84-74-2	22 Day(s), (22 Day(s))	*Gasterosteus aculeatus* (Three-spine Stickle-back), Adult, Male, Wild (OB-TAINED FROM A SERIES OF PONDS NEAR HOOK, HAMP-SHIRE, UNITED KINGDOM)	Fresh water, Aque-ous (aquatic habi-tat), Flow-through, 8 Male organisms	Measured	0 ug/L / 15.23 ug/L / 35.20 ug/L	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	LOEC (35.20 ug/L)	Mechanistic: Biomarkers (exposure and effect); Endocrine toxic-ity; Reproductive/Teratogenic	Medium	788294
84-74-2	96 Hour(s), (96 Hour(s))	*Lepomis macrochirus* (Bluegill), Ju-venile, Not Re-ported, Not re-ported (NR)	Fresh water, Aque-ous (aquatic habi-tat), Static, Not Reported	Measured	NR / NR	Mortality (Mortality-Mortality, Re-sponse Site: Not reported)	LC50 (0.48 mg/L)	Mortality	High	1321996
84-74-2	96 Hour(s), (96 Hour(s))	*Lepomis macrochirus* (Bluegill), Ju-venile, Not Re-ported, Not re-ported (NR)	Fresh water, Aque-ous (aquatic habi-tat), Static, Not Reported	Measured	NR / NR	Mortality (Mortality-Mortality, Re-sponse Site: Not reported)	NOEC (0.42 mg/L)	Mortality	High	1321996

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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
84-74-2	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	<0.0067 mg/L / <0.0067-0.14 mg/L / <0.0067-0.47 mg/L / <0.0067-0.84 mg/L / <0.0067-1.6 mg/L / <0.0067-2.4 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (1.0 (0.85-1.2) mg/L)	Mortality	High	1316201
84-74-2	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	<0.0067 mg/L / <0.0067-0.14 mg/L / <0.0067-0.47 mg/L / <0.0067-0.84 mg/L / <0.0067-1.6 mg/L / <0.0067-2.4 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (1.2 (0.84-1.6) mg/L)	Mortality	High	1316201
84-74-2	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	<0.0067 mg/L / <0.0067-0.14 mg/L / <0.0067-0.47 mg/L / <0.0067-0.84 mg/L / <0.0067-1.6 mg/L / <0.0067-2.4 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (0.85 (0.70-1.0) mg/L)	Mortality	High	1316201
84-74-2	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	<0.0067 mg/L / <0.0067-0.14 mg/L / <0.0067-0.47 mg/L / <0.0067-0.84 mg/L / <0.0067-1.6 mg/L / <0.0067-2.4 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-LETH (<0.0067-1.6 mg/L)	Mortality	High	1316201

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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
84-74-2	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	<0.0067 mg/L / <0.0067-0.14 mg/L / <0.0067-0.47 mg/L / <0.0067-0.84 mg/L / <0.0067-1.6 mg/L / <0.0067-2.4 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (0.85 (0.70-1.0) mg/L)	Mortality	High	1316201
84-74-2	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 (2.1 AI mg/L)	Mortality	Medium	18064
84-74-2	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 (1.2 (1.0-1.4) AI mg/L)	Mortality	Medium	18064

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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
84-74-2	1 Hour(s), (96 Hour(s))	*Leuciscus idus* (Ide, Silver Or Golden Orfe), Not reported, Not Reported, Laboratory (FROM FISCHZUCHT PAUL EGGERS, HOHENWESTEDT, GERMANY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 0.215 mg/L / 0.464 mg/L / 1.0 mg/L / 2.15 mg/L / 4.64 mg/L / 10 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>10 mg/L)	Mortality	Medium	10817969
84-74-2	4 Hour(s), (96 Hour(s))	*Leuciscus idus* (Ide, Silver Or Golden Orfe), Not reported, Not Reported, Laboratory (FROM FISCHZUCHT PAUL EGGERS, HOHENWESTEDT, GERMANY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 0.215 mg/L / 0.464 mg/L / 1.0 mg/L / 2.15 mg/L / 4.64 mg/L / 10 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>10 mg/L)	Mortality	Medium	10817969
84-74-2	24 Hour(s), (96 Hour(s))	*Leuciscus idus* (Ide, Silver Or Golden Orfe), Not reported, Not Reported, Laboratory (FROM FISCHZUCHT PAUL EGGERS, HOHENWESTEDT, GERMANY)	Fresh water, Aqueous (aquatic habitat), Static, 10 Organism	Unmeasured	0 mg/L / 0.1 mg/L / 0.215 mg/L / 0.464 mg/L / 1.0 mg/L / 2.15 mg/L / 4.64 mg/L / 10 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-LETH (10 mg/L)	Mortality	Medium	10817969
84-74-2	24 Hour(s), (96 Hour(s))	*Leuciscus idus* (Ide, Silver Or Golden Orfe), Not reported, Not Reported, Laboratory (FROM FISCHZUCHT PAUL EGGERS, HOHENWESTEDT, GERMANY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 0.215 mg/L / 0.464 mg/L / 1.0 mg/L / 2.15 mg/L / 4.64 mg/L / 10 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>4.64-<10 mg/L)	Mortality	Medium	10817969

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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
84-74-2	48 Hour(s), (96 Hour(s))	*Leuciscus idus* (Ide, Silver Or Golden Orfe), Not reported, Not Reported, Laboratory (FROM FISCHZUCHT PAUL EGGERS, HOHENWESTEDT, GERMANY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 0.215 mg/L / 0.464 mg/L / 1.0 mg/L / 2.15 mg/L / 4.64 mg/L / 10 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>4.64-<10 mg/L)	Mortality	Medium	10817969
84-74-2	72 Hour(s), (96 Hour(s))	*Leuciscus idus* (Ide, Silver Or Golden Orfe), Not reported, Not Reported, Laboratory (FROM FISCHZUCHT PAUL EGGERS, HOHENWESTEDT, GERMANY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 0.215 mg/L / 0.464 mg/L / 1.0 mg/L / 2.15 mg/L / 4.64 mg/L / 10 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>4.64-<10 mg/L)	Mortality	Medium	10817969
84-74-2	96 Hour(s), (96 Hour(s))	*Leuciscus idus* (Ide, Silver Or Golden Orfe), Not reported, Not Reported, Laboratory (FROM FISCHZUCHT PAUL EGGERS, HOHENWESTEDT, GERMANY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 0.215 mg/L / 0.464 mg/L / 1.0 mg/L / 2.15 mg/L / 4.64 mg/L / 10 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>4.64-<10 mg/L)	Mortality	Medium	10817969
84-74-2	96 Hour(s), (96 Hour(s))	*Leuciscus idus* (Ide, Silver Or Golden Orfe), Not reported, Not Reported, Laboratory (FROM FISCHZUCHT PAUL EGGERS, HOHENWESTEDT, GERMANY)	Fresh water, Aqueous (aquatic habitat), Static, 10 Organism	Unmeasured	0 mg/L / 0.1 mg/L / 0.215 mg/L / 0.464 mg/L / 1.0 mg/L / 2.15 mg/L / 4.64 mg/L / 10 mg/L	Behavior (Behavior-Distance moved, change in direct movement, Response Site: Not reported)	NOEC (2.15 mg/L)	Behavioral	Uninformative	10817969

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84-74-2	96 Hour(s), (96 Hour(s))	*Leuciscus idus* (Ide, Silver Or Golden Orfe), Not reported, Not Reported, Laboratory (FROM FISCHZUCHT PAUL EGGERS, HOHENWESTEDT, GERMANY)	Fresh water, Aqueous (aquatic habitat), Static, 10 Organism	Unmeasured	0 mg/L / 0.1 mg/L / 0.215 mg/L / 0.464 mg/L / 1.0 mg/L / 2.15 mg/L / 4.64 mg/L / 10 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (4.64 mg/L)	Mortality	Medium	10817969
84-74-2	30 Day(s), (90 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Juvenile, 44 Days post-hatch, Not Reported, Laboratory (AQUARIUM INDUSTRIES, VICTORIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.004-<0.012 ug/L / <0.004-<0.012 ug/L / 5-6 ug/L / 12-15 ug/L / 36-50 ug/L	Growth (Development-Sexual development, Response Site: Not reported)	LOEC (12-15 ug/L)	Reproductive/Teratogenic	High	2816886
84-74-2	30 Day(s), (90 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Juvenile, 44 Days post-hatch, Not Reported, Laboratory (AQUARIUM INDUSTRIES, VICTORIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.004-<0.012 ug/L / <0.004-<0.012 ug/L / 5-6 ug/L / 12-15 ug/L / 36-50 ug/L	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Whole organism)	LOEC (12-15 ug/L)	Mechanistic: Endocrine toxicity	High	2816886
84-74-2	30 Day(s), (90 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Juvenile, 44 Days post-hatch, Not Reported, Laboratory (AQUARIUM INDUSTRIES, VICTORIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.004-<0.012 ug/L / <0.004-<0.012 ug/L / 5-6 ug/L / 12-15 ug/L / 36-50 ug/L	Biochemical (Hormone(s)-11-Ketotestosterone, Response Site: Whole organism)	LOEC (12-15 ug/L)	Mechanistic: Endocrine toxicity	High	2816886

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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
84-74-2	30 Day(s), (90 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Juvenile, 44 Days post-hatch, Not Reported, Laboratory (AQUARIUM INDUSTRIES, VICTORIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.004-<0.012 ug/L / <0.004-<0.012 ug/L / 5-6 ug/L / 12-15 ug/L / 36-50 ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (>36->50 ug/L)	Development/Growth	High	2816886
84-74-2	30 Day(s), (90 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Juvenile, 44 Days post-hatch, Not Reported, Laboratory (AQUARIUM INDUSTRIES, VICTORIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.004-<0.012 ug/L / <0.004-<0.012 ug/L / 5-6 ug/L / 12-15 ug/L / 36-50 ug/L	Biochemical (Hormone(s)-17beta-Estradiol:11-Ketotestosterone ratio, Response Site: Whole organism)	LOEC (36-50 ug/L)	Mechanistic: Endocrine toxicity	High	2816886
84-74-2	30 Day(s), (90 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Juvenile, 44 Days post-hatch, Not Reported, Laboratory (AQUARIUM INDUSTRIES, VICTORIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.004-<0.012 ug/L / <0.004-<0.012 ug/L / 5-6 ug/L / 12-15 ug/L / 36-50 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (>36->50 ug/L)	Mortality	High	2816886
84-74-2	30 Day(s), (90 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Juvenile, 44 Days post-hatch, Not Reported, Laboratory (AQUARIUM INDUSTRIES, VICTORIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.004-<0.012 ug/L / <0.004-<0.012 ug/L / 5-6 ug/L / 12-15 ug/L / 36-50 ug/L	Growth (Morphology-Condition index, Response Site: Whole organism)	LOEC (>36->50 ug/L)	Development/Growth	High	2816886

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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
84-74-2	30 Day(s), (90 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Juvenile, 44 Days post-hatch, Not Reported, Laboratory (AQUARIUM INDUSTRIES, VICTORIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.004-<0.012 ug/L / <0.004-<0.012 ug/L / 5-6 ug/L / 12-15 ug/L / 36-50 ug/L	Biochemical (Hormone(s)-17beta-Estradiol:11-Ketotestosterone ratio, Response Site: Whole organism)	NOEC (12-15 ug/L)	Mechanistic: Endocrine toxicity	High	2816886
84-74-2	30 Day(s), (90 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Juvenile, 44 Days post-hatch, Not Reported, Laboratory (AQUARIUM INDUSTRIES, VICTORIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.004-<0.012 ug/L / <0.004-<0.012 ug/L / 5-6 ug/L / 12-15 ug/L / 36-50 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (36-50 ug/L)	Development/Growth	High	2816886
84-74-2	30 Day(s), (90 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Juvenile, 44 Days post-hatch, Not Reported, Laboratory (AQUARIUM INDUSTRIES, VICTORIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.004-<0.012 ug/L / <0.004-<0.012 ug/L / 5-6 ug/L / 12-15 ug/L / 36-50 ug/L	Growth (Morphology-Condition index, Response Site: Whole organism)	NOEC (36-50 ug/L)	Development/Growth	High	2816886
84-74-2	30 Day(s), (90 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Juvenile, 44 Days post-hatch, Not Reported, Laboratory (AQUARIUM INDUSTRIES, VICTORIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.004-<0.012 ug/L / <0.004-<0.012 ug/L / 5-6 ug/L / 12-15 ug/L / 36-50 ug/L	Growth (Morphology-Imposex, intersex conditions, Response Site: Not reported)	NOEC (36-50 ug/L)	Reproductive/Teratogenic	High	2816886

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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
84-74-2	30 Day(s), (90 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Juvenile, 44 Days post-hatch, Not Reported, Laboratory (AQUARIUM INDUSTRIES, VICTORIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.004-<0.012 ug/L / <0.004-<0.012 ug/L / 5-6 ug/L / 12-15 ug/L / 36-50 ug/L	Biochemical (Hormone(s)-11-Ketotestosterone, Response Site: Whole organism)	NOEC (5-6 ug/L)	Mechanistic: Endocrine toxicity	High	2816886
84-74-2	30 Day(s), (90 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Juvenile, 44 Days post-hatch, Not Reported, Laboratory (AQUARIUM INDUSTRIES, VICTORIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.004-<0.012 ug/L / <0.004-<0.012 ug/L / 5-6 ug/L / 12-15 ug/L / 36-50 ug/L	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Whole organism)	NOEC (5-6 ug/L)	Mechanistic: Endocrine toxicity	High	2816886
84-74-2	30 Day(s), (90 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Juvenile, 44 Days post-hatch, Not Reported, Laboratory (AQUARIUM INDUSTRIES, VICTORIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.004-<0.012 ug/L / <0.004-<0.012 ug/L / 5-6 ug/L / 12-15 ug/L / 36-50 ug/L	Growth (Development-Sexual development, Response Site: Not reported)	NOEC (5-6 ug/L)	Reproductive/Teratogenic	High	2816886
84-74-2	30 Day(s), (90 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Juvenile, 44 Days post-hatch, Not Reported, Laboratory (AQUARIUM INDUSTRIES, VICTORIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.004-<0.012 ug/L / <0.004-<0.012 ug/L / 5-6 ug/L / 12-15 ug/L / 36-50 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (5-6 ug/L)	Development/Growth	High	2816886

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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
84-74-2	30 Day(s), (90 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Juvenile, 44 Days post-hatch, Not Reported, Laboratory (AQUARIUM INDUSTRIES, VICTORIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.004-<0.012 ug/L / <0.004-<0.012 ug/L / 5-6 ug/L / 12-15 ug/L / 36-50 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (36-50 ug/L)	Mortality	High	2816886
84-74-2	30 Day(s), (90 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Juvenile, 44 Days post-hatch, Not Reported, Laboratory (AQUARIUM INDUSTRIES, VICTORIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.004-<0.012 ug/L / <0.004-<0.012 ug/L / 5-6 ug/L / 12-15 ug/L / 36-50 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (12-15 ug/L)	Development/Growth	High	2816886
84-74-2	30 Day(s), (90 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Juvenile, 44 Days post-hatch, Not Reported, Laboratory (AQUARIUM INDUSTRIES, VICTORIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.004-<0.012 ug/L / <0.004-<0.012 ug/L / 5-6 ug/L / 12-15 ug/L / 36-50 ug/L	Growth (Morphology-Imposex, intersex conditions, Response Site: Not reported)	LOEC (>36->50 ug/L)	Reproductive/Teratogenic	High	2816886
84-74-2	30 Day(s), (90 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Juvenile, 44 Days post-hatch, Not Reported, Laboratory (AQUARIUM INDUSTRIES, VICTORIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.004-<0.012 ug/L / <0.004-<0.012 ug/L / 5-6 ug/L / 12-15 ug/L / 36-50 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (36-50 ug/L)	Mortality	High	2816886

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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
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, ~12 Month(s), Female, Laboratory (AQUARIUM INDUSTRIES)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 12.2-109 ug/L / 28-145 ug/L / 72-257 ug/L / 147-457 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Gonad(s))	NOEC (147-457 ug/L)	Reproductive/Teratogenic	High	1639196
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, ~12 Month(s), Female, Laboratory (AQUARIUM INDUSTRIES)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 12.2-109 ug/L / 28-145 ug/L / 72-257 ug/L / 147-457 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (147-457 ug/L)	Mortality	High	1639196
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, ~12 Month(s), Female, Laboratory (AQUARIUM INDUSTRIES)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 12.2-109 ug/L / 28-145 ug/L / 72-257 ug/L / 147-457 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Liver)	NOEC (147-457 ug/L)	Hepatic/Liver	High	1639196
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, ~12 Month(s), Female, Laboratory (AQUARIUM INDUSTRIES)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 12.2-109 ug/L / 28-145 ug/L / 72-257 ug/L / 147-457 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (147-457 ug/L)	Mortality	High	1639196
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, ~12 Month(s), Female, Laboratory (AQUARIUM INDUSTRIES)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 12.2-109 ug/L / 28-145 ug/L / 72-257 ug/L / 147-457 ug/L	Biochemical (Biochemistry-Vitellogenin, Response Site: Plasma)	NOEC (28-145 ug/L)	Mechanistic: Biomarkers (exposure and effect); Endocrine toxicity	High	1639196

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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
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, ~12 Month(s), Female, Laboratory (AQUARIUM INDUSTRIES)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 12.2-109 ug/L / 28-145 ug/L / 72-257 ug/L / 147-457 ug/L	Growth (Morphology-Size, Response Site: Ovarian follicle)	NOEC (72-257 ug/L)	Reproductive/Teratogenic	High	1639196
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, ~12 Month(s), Female, Laboratory (AQUARIUM INDUSTRIES)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 12.2-109 ug/L / 28-145 ug/L / 72-257 ug/L / 147-457 ug/L	Cellular (Cell(s)-Height, Response Site: Ovarian follicle)	NR (147-457 ug/L)	Reproductive/Teratogenic	High	1639196
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, ~12 Month(s), Female, Laboratory (AQUARIUM INDUSTRIES)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 12.2-109 ug/L / 28-145 ug/L / 72-257 ug/L / 147-457 ug/L	Growth (Morphology-Thickness, Response Site: Chorion)	NR (147-457 ug/L)	Reproductive/Teratogenic	High	1639196
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, ~12 Month(s), Female, Laboratory (AQUARIUM INDUSTRIES)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 12.2-109 ug/L / 28-145 ug/L / 72-257 ug/L / 147-457 ug/L	Growth (Growth-Length,Weight, Response Site: Not reported)	NOEC (147-457 ug/L)	Development/Growth	High	1639196
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, ~12 Month(s), Female, Laboratory (AQUARIUM INDUSTRIES)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 12.2-109 ug/L / 28-145 ug/L / 72-257 ug/L / 147-457 ug/L	Growth (Morphology-Size, Response Site: Ovarian follicle)	NOEC (147-457 ug/L)	Reproductive/Teratogenic	High	1639196

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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
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, ~12 Month(s), Female, Laboratory (AQUARIUM INDUSTRIES)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 12.2-109 ug/L / 28-145 ug/L / 72-257 ug/L / 147-457 ug/L	Growth (Growth-Condition index, Response Site: Not reported)	NOEC (147-457 ug/L)	Development/Growth	High	1639196
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, ~12 Month(s), Female, Laboratory (AQUARIUM INDUSTRIES)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 12.2-109 ug/L / 28-145 ug/L / 72-257 ug/L / 147-457 ug/L	Growth (Development-Developmental changes, general, Response Site: Not reported)	NR (12.2-457 ug/L)	Development/Growth	High	1639196
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, ~12 Month(s), Female, Laboratory (AQUARIUM INDUSTRIES)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 12.2-109 ug/L / 28-145 ug/L / 72-257 ug/L / 147-457 ug/L	Biochemical (Biochemistry-Vitellogenin, Response Site: Plasma)	LOEC (72-257 ug/L)	Mechanistic: Biomarkers (exposure and effect); Endocrine toxicity	High	1639196
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, ~12 Month(s), Female, Laboratory (AQUARIUM INDUSTRIES)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 12.2-109 ug/L / 28-145 ug/L / 72-257 ug/L / 147-457 ug/L	Growth (Morphology-Size, Response Site: Ovarian follicle)	LOEC (72-257 ug/L)	Reproductive/Teratogenic	High	1639196
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, ~12 Month(s), Female, Laboratory (AQUARIUM INDUSTRIES)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 12.2-109 ug/L / 28-145 ug/L / 72-257 ug/L / 147-457 ug/L	Growth (Morphology-Size, Response Site: Ovarian follicle)	LOEC (28-145 ug/L)	Reproductive/Teratogenic	High	1639196

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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
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, ~12 Month(s), Female, Laboratory (AQUARIUM INDUSTRIES)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 12.2-109 ug/L / 28-145 ug/L / 72-257 ug/L / 147-457 ug/L	Growth (Morphology-Size, Response Site: Ovarian follicle)	LOEC (147-457 ug/L)	Reproductive/Teratogenic	High	1639196
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, ~12 Month(s), Female, Laboratory (AQUARIUM INDUSTRIES)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 12.2-109 ug/L / 28-145 ug/L / 72-257 ug/L / 147-457 ug/L	Cellular (Histology-Histological changes, general, Response Site: Oocyte,Ovaries)	NR (28-457 ug/L)	Reproductive/Teratogenic	High	1639196
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, ~12 Month(s), Female, Laboratory (AQUARIUM INDUSTRIES)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 12.2-109 ug/L / 28-145 ug/L / 72-257 ug/L / 147-457 ug/L	Growth (Morphology-Size, Response Site: Ovarian follicle)	NOEC (28-145 ug/L)	Reproductive/Teratogenic	High	1639196
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Reproduction (Reproduction-Spermatigonia, Response Site: Testes)	LOEC (21 ug/L)	Reproductive/Teratogenic	High	2509291
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Cellular (Genetics-Androgen receptor beta mRNA, Response Site: Liver)	NOEC (21 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	2509291

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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
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Reproduction (Reproduction-Spermatigonia, Response Site: Testes)	NR (14-113 ug/L)	Reproductive/Teratogenic	High	2509291
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Cellular (Genetics-Androgen receptor alpha mRNA , Response Site: Liver)	NOEC (74 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	2509291
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Biochemical (Enzyme(s)-Aromatase, Response Site: Brain)	NOEC (74 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	2509291
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Cellular (Genetics-Choriogenin L mRNA, Response Site: Liver)	NOEC (74 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	2509291

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84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Cellular (Genetics-Estrogen receptor beta mRNA, Response Site: Liver)	NR (14-113 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	2509291
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Liver)	NR (14-113 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	2509291
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Cellular (Histology-Fibrosis, Response Site: Testes)	NR (14-113 ug/L)	Reproductive/Teratogenic	High	2509291
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Reproduction (Reproduction-Spermatocytes, Response Site: Testes)	NR (14-113 ug/L)	Reproductive/Teratogenic	High	2509291

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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
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Reproduction (Reproduction-Sperm cell counts, Response Site: Testes)	NR (14-113 ug/L)	Reproductive/Teratogenic	High	2509291
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Reproduction (Reproduction-Spermatocytes, Response Site: Testes)	NOEC (21 ug/L)	Reproductive/Teratogenic	High	2509291
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Reproduction (Reproduction-Spermatocytes, Response Site: Testes)	LOEC (14 ug/L)	Reproductive/Teratogenic	High	2509291
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Reproduction (Reproduction-Sperm cell counts, Response Site: Testes)	LOEC (14 ug/L)	Reproductive/Teratogenic	High	2509291

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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
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Reproduction (Reproduction-Sperm cell counts, Response Site: Testes)	NOEC (113 ug/L)	Reproductive/Teratogenic	High	2509291
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Biochemical (Biochemistry-Vitellogenin, Response Site: Serum)	LOEC (74 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	2509291
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Cellular (Genetics-Choriogenin L mRNA, Response Site: Liver)	LOEC (113 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	2509291
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Cellular (Genetics-Estrogen receptor alpha mRNA, Response Site: Liver)	LOEC (14 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	2509291

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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
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Cellular (Genetics-Androgen receptor beta mRNA, Response Site: Liver)	LOEC (74 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	2509291
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Reproduction (Reproduction-Spermatigonia, Response Site: Testes)	NOEC (14 ug/L)	Reproductive/Teratogenic	High	2509291
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Growth (Growth-Condition index, Response Site: Not reported)	NOEC (113 ug/L)	Development/Growth	High	2509291
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (113 ug/L)	Development/Growth	High	2509291

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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
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (113 ug/L)	Mortality	High	2509291
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Liver)	NOEC (113 ug/L)	Hepatic/Liver	High	2509291
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Testes)	NOEC (113 ug/L)	Reproductive/Teratogenic	High	2509291
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Cellular (Genetics-Androgen receptor alpha mRNA , Response Site: Liver)	LOEC (113 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	2509291

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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
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Biochemical (Biochemistry-Vitellogenin, Response Site: Serum)	NOEC (21 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	2509291
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Biochemical (Enzyme(s)-Aromatase, Response Site: Brain)	LOEC (113 ug/L)	Mechanistic: Biomarkers (exposure and effect)	High	2509291
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Reproduction (Reproduction-Spermatocytes, Response Site: Testes)	LOEC (74 ug/L)	Reproductive/Teratogenic	High	2509291
84-74-2	7 Day(s), (7 Day(s))	*Melanotaenia fluviatilis* (Crimson-Spotted Rainbowfish), Adult, 12 Month(s), Male, Laboratory (AQUARIUM INDUSTRIES, VICTORIA, AUSTRALIA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<6 ug/L / <6 ug/L / 14 ug/L / 21 ug/L / 74 ug/L / 113 ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (113 ug/L)	Development/Growth	High	2509291

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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
84-74-2	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)	NOEC (0.50 mg/L)	Mortality	High	1321996
84-74-2	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 (1.60 mg/L)	Mortality	High	1321996
84-74-2	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	<0.0067 mg/L / 0.22 (0.17-0.24) mg/L / 0.5 (0.44-0.58) mg/L / 1.1 (1.0-1.2) mg/L / 2.2 (1.9-2.6) mg/L / 6.1 (5.8-6.4) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-LETH (2.2 (1.9-2.6) mg/L)	Mortality	High	5530771
84-74-2	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	<0.0067 mg/L / 0.22 (0.17-0.24) mg/L / 0.5 (0.44-0.58) mg/L / 1.1 (1.0-1.2) mg/L / 2.2 (1.9-2.6) mg/L / 6.1 (5.8-6.4) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (1.6 (1.1-2.2) mg/L)	Mortality	High	5530771

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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
84-74-2	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	<0.0067 mg/L / 0.22 (0.17-0.24) mg/L / 0.5 (0.44-0.58) mg/L / 1.1 (1.0-1.2) mg/L / 2.2 (1.9-2.6) mg/L / 6.1 (5.8-6.4) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (1.6 (1.1-2.2) mg/L)	Mortality	High	5530771
84-74-2	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	<0.0067 mg/L / 0.22 (0.17-0.24) mg/L / 0.5 (0.44-0.58) mg/L / 1.1 (1.0-1.2) mg/L / 2.2 (1.9-2.6) mg/L / 6.1 (5.8-6.4) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (1.1 (1.0-1.2) mg/L)	Mortality	High	5530771
84-74-2	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	<0.0067 mg/L / 0.22 (0.17-0.24) mg/L / 0.5 (0.44-0.58) mg/L / 1.1 (1.0-1.2) mg/L / 2.2 (1.9-2.6) mg/L / 6.1 (5.8-6.4) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (1.6 (1.1-2.2) mg/L)	Mortality	High	5530771

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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
84-74-2	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	<0.0067 mg/L / 0.22 (0.17-0.24) mg/L / 0.5 (0.44-0.58) mg/L / 1.1 (1.0-1.2) mg/L / 2.2 (1.9-2.6) mg/L / 6.1 (5.8-6.4) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (0.5 (0.44-0.58) mg/L)	Mortality	High	5530771
84-74-2	2 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.06-<0.12 mg/L / <0.06-<0.12 mg/L / 0.10 (0.074-0.14) mg/L / 0.19 (0.14-0.28) mg/L / 0.40 (0.36-0.55) mg/L / 0.84 (0.72-1.1) mg/L / 1.7 (1.5-2.2) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (>1.7 mg/L)	Mortality	High	6571362
84-74-2	2 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.06-<0.12 mg/L / <0.06-<0.12 mg/L / 0.10 (0.074-0.14) mg/L / 0.19 (0.14-0.28) mg/L / 0.40 (0.36-0.55) mg/L / 0.84 (0.72-1.1) mg/L / 1.7 (1.5-2.2) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	MATC (>1.7 mg/L)	Mortality	High	6571362

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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
84-74-2	2 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.06-<0.12 mg/L / <0.06-<0.12 mg/L / 0.10 (0.074-0.14) mg/L / 0.19 (0.14-0.28) mg/L / 0.40 (0.36-0.55) mg/L / 0.84 (0.72-1.1) mg/L / 1.7 (1.5-2.2) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (1.7 mg/L)	Mortality	High	6571362
84-74-2	96 Hour(s), (13 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Juvenile, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 mg/L / 0.14 mg/L / 0.26 mg/L / 0.52 mg/L / 1.0 mg/L / 2.0 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (1.4 mg/L)	Mortality	Medium	6571362
84-74-2	96 Hour(s), (13 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Juvenile, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 mg/L / 0.14 mg/L / 0.26 mg/L / 0.52 mg/L / 1.0 mg/L / 2.0 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEC (2.0 mg/L)	Mortality	Medium	6571362

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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
84-74-2	96 Hour(s), (13 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Juvenile, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 mg/L / 0.14 mg/L / 0.26 mg/L / 0.52 mg/L / 1.0 mg/L / 2.0 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (1.0 mg/L)	Mortality	Medium	6571362
84-74-2	13 Day(s), (13 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Juvenile, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 mg/L / 0.14 mg/L / 0.26 mg/L / 0.52 mg/L / 1.0 mg/L / 2.0 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (1.3 mg/L)	Mortality	Medium	6571362
84-74-2	13 Day(s), (13 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Juvenile, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 mg/L / 0.14 mg/L / 0.26 mg/L / 0.52 mg/L / 1.0 mg/L / 2.0 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEC (1.0 mg/L)	Mortality	Medium	6571362
84-74-2	13 Day(s), (13 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Juvenile, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 mg/L / 0.14 mg/L / 0.26 mg/L / 0.52 mg/L / 1.0 mg/L / 2.0 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (0.52 mg/L)	Mortality	Medium	6571362

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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
84-74-2	40 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.06-<0.12 mg/L / <0.06-<0.12 mg/L / 0.10 (0.074-0.14) mg/L / 0.19 (0.14-0.28) mg/L / 0.40 (0.36-0.55) mg/L / 0.84 (0.72-1.1) mg/L / 1.7 (1.5-2.2) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	MATC (0.28 mg/L)	Mortality	High	6571362
84-74-2	40 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.06-<0.12 mg/L / <0.06-<0.12 mg/L / 0.10 (0.074-0.14) mg/L / 0.19 (0.14-0.28) mg/L / 0.40 (0.36-0.55) mg/L / 0.84 (0.72-1.1) mg/L / 1.7 (1.5-2.2) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.19 mg/L)	Mortality	High	6571362
84-74-2	40 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.06-<0.12 mg/L / <0.06-<0.12 mg/L / 0.10 (0.074-0.14) mg/L / 0.19 (0.14-0.28) mg/L / 0.40 (0.36-0.55) mg/L / 0.84 (0.72-1.1) mg/L / 1.7 (1.5-2.2) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (0.40 mg/L)	Mortality	High	6571362

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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
84-74-2	62 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.06-<0.12 mg/L / <0.06-<0.12 mg/L / 0.10 (0.074-0.14) mg/L / 0.19 (0.14-0.28) mg/L / 0.40 (0.36-0.55) mg/L / 0.84 (0.72-1.1) mg/L / 1.7 (1.5-2.2) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	MATC (0.28 mg/L)	Mortality	High	6571362
84-74-2	62 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.06-<0.12 mg/L / <0.06-<0.12 mg/L / 0.10 (0.074-0.14) mg/L / 0.19 (0.14-0.28) mg/L / 0.40 (0.36-0.55) mg/L / 0.84 (0.72-1.1) mg/L / 1.7 (1.5-2.2) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.19 mg/L)	Mortality	High	6571362
84-74-2	62 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.06-<0.12 mg/L / <0.06-<0.12 mg/L / 0.10 (0.074-0.14) mg/L / 0.19 (0.14-0.28) mg/L / 0.40 (0.36-0.55) mg/L / 0.84 (0.72-1.1) mg/L / 1.7 (1.5-2.2) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (0.40 mg/L)	Mortality	High	6571362

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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
84-74-2	99 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.06-<0.12 mg/L / <0.06-<0.12 mg/L / 0.10 (0.074-0.14) mg/L / 0.19 (0.14-0.28) mg/L / 0.40 (0.36-0.55) mg/L / 0.84 (0.72-1.1) mg/L / 1.7 (1.5-2.2) mg/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (0.19 mg/L)	Development/Growth	High	6571362
84-74-2	99 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.06-<0.12 mg/L / <0.06-<0.12 mg/L / 0.10 (0.074-0.14) mg/L / 0.19 (0.14-0.28) mg/L / 0.40 (0.36-0.55) mg/L / 0.84 (0.72-1.1) mg/L / 1.7 (1.5-2.2) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (0.40 mg/L)	Mortality	High	6571362
84-74-2	99 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.06-<0.12 mg/L / <0.06-<0.12 mg/L / 0.10 (0.074-0.14) mg/L / 0.19 (0.14-0.28) mg/L / 0.40 (0.36-0.55) mg/L / 0.84 (0.72-1.1) mg/L / 1.7 (1.5-2.2) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (0.10 mg/L)	Development/Growth	High	6571362

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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
84-74-2	99 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.06-<0.12 mg/L / <0.06-<0.12 mg/L / 0.10 (0.074-0.14) mg/L / 0.19 (0.14-0.28) mg/L / 0.40 (0.36-0.55) mg/L / 0.84 (0.72-1.1) mg/L / 1.7 (1.5-2.2) mg/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (0.10 mg/L)	Development/Growth	High	6571362
84-74-2	99 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.06-<0.12 mg/L / <0.06-<0.12 mg/L / 0.10 (0.074-0.14) mg/L / 0.19 (0.14-0.28) mg/L / 0.40 (0.36-0.55) mg/L / 0.84 (0.72-1.1) mg/L / 1.7 (1.5-2.2) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	MATC (0.28 mg/L)	Mortality	High	6571362
84-74-2	99 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.06-<0.12 mg/L / <0.06-<0.12 mg/L / 0.10 (0.074-0.14) mg/L / 0.19 (0.14-0.28) mg/L / 0.40 (0.36-0.55) mg/L / 0.84 (0.72-1.1) mg/L / 1.7 (1.5-2.2) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.19 mg/L)	Mortality	High	6571362

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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
84-74-2	99 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.06-<0.12 mg/L / <0.06-<0.12 mg/L / 0.10 (0.074-0.14) mg/L / 0.19 (0.14-0.28) mg/L / 0.40 (0.36-0.55) mg/L / 0.84 (0.72-1.1) mg/L / 1.7 (1.5-2.2) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	MATC (0.14 mg/L)	Development/Growth	High	6571362
84-74-2	99 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.06-<0.12 mg/L / <0.06-<0.12 mg/L / 0.10 (0.074-0.14) mg/L / 0.19 (0.14-0.28) mg/L / 0.40 (0.36-0.55) mg/L / 0.84 (0.72-1.1) mg/L / 1.7 (1.5-2.2) mg/L	Growth (Growth-Length, Response Site: Whole organism)	MATC (0.14 mg/L)	Development/Growth	High	6571362
84-74-2	99 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, Not Reported, Laboratory (FROM EGGS AND SPERM OBTAINED FROM MT. LASSEN TROUT FARMS)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.06-<0.12 mg/L / <0.06-<0.12 mg/L / 0.10 (0.074-0.14) mg/L / 0.19 (0.14-0.28) mg/L / 0.40 (0.36-0.55) mg/L / 0.84 (0.72-1.1) mg/L / 1.7 (1.5-2.2) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (0.19 mg/L)	Development/Growth	High	6571362
84-74-2	99 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, <4.5 Hours post fertilization, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0 mg/L / 0.10 mg/L / 0.19 mg/L / 0.40 mg/L / 0.84 mg/L / 1.7 mg/L	Growth (Growth-Growth, general, Response Site: Whole organism)	NOEC (0.10 mg/L)	Development/Growth	High	680120

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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
84-74-2	99 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, <4.5 Hours post fertilization, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0 mg/L / 0.10 mg/L / 0.19 mg/L / 0.40 mg/L / 0.84 mg/L / 1.7 mg/L	Growth (Growth-Growth, general, Response Site: Whole organism)	LOEC (0.19 mg/L)	Development/Growth	High	680120
84-74-2	99 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, <4.5 Hours post fertilization, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0 mg/L / 0.10 mg/L / 0.19 mg/L / 0.40 mg/L / 0.84 mg/L / 1.7 mg/L	Growth (Growth-Growth, general, Response Site: Whole organism)	MATC (0.14 mg/L)	Development/Growth	High	680120
84-74-2	99 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, <4.5 Hours post fertilization, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0 mg/L / 0.10 mg/L / 0.19 mg/L / 0.40 mg/L / 0.84 mg/L / 1.7 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (0.40 mg/L)	Mortality	High	680120
84-74-2	99 Day(s), (99 Day(s))	*Oncorhynchus mykiss* (Rainbow Trout), Embryo, <4.5 Hours post fertilization, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0 mg/L / 0.10 mg/L / 0.19 mg/L / 0.40 mg/L / 0.84 mg/L / 1.7 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.19 mg/L)	Mortality	High	680120
84-74-2	24 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (CUKUROVA UNIVERSITY FRESHWATER FISH PRODUCTION STATION, ADANA, TURKEY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 10 mg/L	Biochemical (Biochemistry-Glutathione, total, Response Site: Gill(s))	NR (10 mg/L)	Mechanistic: Oxidative stress (including redox biology); Immune/Hematological	High	3974179

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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
84-74-2	24 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (CUKUROVA UNIVERSITY FRESHWATER FISH PRODUCTION STATION, ADANA, TURKEY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 10 mg/L	Biochemical (Biochemistry-Thiobarbituric acid reactive substances, Response Site: Liver)	NOEC (10 mg/L)	Mechanistic: Oxidative stress (including redox biology); Immune/Hematological	High	3974179
84-74-2	24 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (CUKUROVA UNIVERSITY FRESHWATER FISH PRODUCTION STATION, ADANA, TURKEY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 10 mg/L	Biochemical (Biochemistry-Thiobarbituric acid reactive substances, Response Site: Gill(s))	NOEC (10 mg/L)	Mechanistic: Oxidative stress (including redox biology); Immune/Hematological	High	3974179
84-74-2	24 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (CUKUROVA UNIVERSITY FRESHWATER FISH PRODUCTION STATION, ADANA, TURKEY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 10 mg/L	Biochemical (Biochemistry-Hematocrit (anemia), Response Site: Blood)	NOEC (10 mg/L)	Mechanistic: Oxidative stress (including redox biology); Immune/Hematological	High	3974179

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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
84-74-2	24 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (CUKUROVA UNIVERSITY FRESHWATER FISH PRODUCTION STATION, ADANA, TURKEY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 10 mg/L	Biochemical (Biochemistry-Glutathione, total, Response Site: Liver)	NOEC (10 mg/L)	Mechanistic: Oxidative stress (including redox biology); Immune/Hematological	High	3974179
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (CUKUROVA UNIVERSITY FRESHWATER FISH PRODUCTION STATION, ADANA, TURKEY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 10 mg/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (10 mg/L)	Development/Growth	High	3974179
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (CUKUROVA UNIVERSITY FRESHWATER FISH PRODUCTION STATION, ADANA, TURKEY)	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)	NR-ZERO (10 mg/L)	Mortality	High	3974179

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (CUKUROVA UNIVERSITY FRESHWATER FISH PRODUCTION STATION, ADANA, TURKEY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 10 mg/L	Cellular (Histology-Congestion,Dilation,Edema,Fuse, fused,Hyperplasia,Vacuolization, Response Site: Gill(s),Liver)	NR (10 mg/L)	Hepatic/Liver	High	3974179
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (CUKUROVA UNIVERSITY FRESHWATER FISH PRODUCTION STATION, ADANA, TURKEY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 10 mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (10 mg/L)	Development/Growth	High	3974179
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (CUKUROVA UNIVERSITY FRESHWATER FISH PRODUCTION STATION, ADANA, TURKEY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 10 mg/L	Biochemical (Biochemistry-Glutathione, total, Response Site: Gill(s))	LOEC (10 mg/L)	Mechanistic: Oxidative stress (including redox biology); Immune/Hematological	High	3974179

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (CUKUROVA UNIVERSITY FRESHWATER FISH PRODUCTION STATION, ADANA, TURKEY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 10 mg/L	Biochemical (Biochemistry-Glutathione, total, Response Site: Liver)	NOEC (10 mg/L)	Mechanistic: Oxidative stress (including redox biology); Immune/Hematological	High	3974179
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (CUKUROVA UNIVERSITY FRESHWATER FISH PRODUCTION STATION, ADANA, TURKEY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 10 mg/L	Biochemical (Biochemistry-Thiobarbituric acid reactive substances, Response Site: Gill(s))	LOEC (10 mg/L)	Mechanistic: Oxidative stress (including redox biology); Immune/Hematological	High	3974179
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (CUKUROVA UNIVERSITY FRESHWATER FISH PRODUCTION STATION, ADANA, TURKEY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 10 mg/L	Biochemical (Biochemistry-Thiobarbituric acid reactive substances, Response Site: Liver)	NOEC (10 mg/L)	Mechanistic: Oxidative stress (including redox biology); Immune/Hematological	High	3974179

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (CUKUROVA UNIVERSITY FRESHWATER FISH PRODUCTION STATION, ADANA, TURKEY)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 10 mg/L	Cellular (Histology-Congestion,Dilation,Edema,Fuse, fused,Hyperplasia,Vacuolization, Response Site: Gill(s),Liver)	NR (10 mg/L)	Respiratory	High	3974179
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (ABBASSA FISH HATCHERY, EGYPT)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 3.9 mg/L / 5.9 mg/L	Biochemical (Biochemistry-Urea, Response Site: Serum)	LOEC (3.9 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Cardiovascular; Endocrine toxicity; Liver toxicology	Medium	3350208
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (ABBASSA FISH HATCHERY, EGYPT)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 3.9 mg/L / 5.9 mg/L	Cellular (Histology-Degeneration,Edema,Hemorrhage,Hyperplasia,Lesions,Necrosis,Vacuolization, Response Site: Gill(s),Kidney,Liver)	NR (3.9-5.9 mg/L)	Respiratory	Medium	3350208
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (ABBASSA FISH HATCHERY, EGYPT)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 3.9 mg/L / 5.9 mg/L	Cellular (Histology-Degeneration,Edema,Hemorrhage,Hyperplasia,Lesions,Necrosis,Vacuolization, Response Site: Gill(s),Kidney,Liver)	NR (3.9-5.9 mg/L)	Renal/Kidney	Medium	3350208

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (ABBASSA FISH HATCHERY, EGYPT)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 3.9 mg/L / 5.9 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (3.9-5.9 mg/L)	Mortality	Medium	3350208
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (ABBASSA FISH HATCHERY, EGYPT)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 3.9 mg/L / 5.9 mg/L	Cellular (Histology-Degeneration,Edema,Hemorrhage,Hyperplasia,Lesions,Necrosis,Vacuolization, Response Site: Gill(s),Kidney,Liver)	NR (3.9-5.9 mg/L)	Hepatic/Liver	Medium	3350208
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (ABBASSA FISH HATCHERY, EGYPT)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 3.9 mg/L / 5.9 mg/L	Cellular (Cell(s)-Pyknosis, Response Site: Gill(s),Kidney,Liver)	NR (3.9-5.9 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Cardiovascular; Liver toxicology	Medium	3350208
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (ABBASSA FISH HATCHERY, EGYPT)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 3.9 mg/L / 5.9 mg/L	Cellular (Genetics-Damage, Response Site: Gill(s))	LOEC (3.9 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Cardiovascular; Endocrine toxicity; Liver toxicology	Medium	3350208

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (AB-BASSA FISH HATCHERY, EGYPT)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 3.9 mg/L / 5.9 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Serum)	LOEC (3.9 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Cardiovascular; Endocrine toxicity; Liver toxicology	Medium	3350208
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (AB-BASSA FISH HATCHERY, EGYPT)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 3.9 mg/L / 5.9 mg/L	Biochemical (Enzyme(s)-Alanine transaminase (ALT), Response Site: Serum)	LOEC (3.9 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Cardiovascular; Endocrine toxicity; Liver toxicology	Medium	3350208
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (AB-BASSA FISH HATCHERY, EGYPT)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 3.9 mg/L / 5.9 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Serum)	LOEC (3.9 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Cardiovascular; Endocrine toxicity; Liver toxicology	Medium	3350208

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (AB-BASSA FISH HATCHERY, EGYPT)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 3.9 mg/L / 5.9 mg/L	Biochemical (Biochemistry-Glutathione, total, Response Site: Serum)	LOEC (3.9 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Cardiovascular; Endocrine toxicity; Liver toxicology	Medium	3350208
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (AB-BASSA FISH HATCHERY, EGYPT)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 3.9 mg/L / 5.9 mg/L	Biochemical (Biochemistry-Creatinine, Response Site: Serum)	LOEC (3.9 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Cardiovascular; Endocrine toxicity; Liver toxicology	Medium	3350208
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (AB-BASSA FISH HATCHERY, EGYPT)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 4 mg/L / 6 mg/L / 8 mg/L / 10 mg/L / 12 mg/L / 14 mg/L / 16 mg/L / 18 mg/L / 20 mg/L / 22 mg/L / 24 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (11.8 mg/L)	Mortality	Medium	3350208

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Oreochromis niloticus* (Nile Tilapia), Juvenile, Not Reported, Laboratory (AB-BASSA FISH HATCHERY, EGYPT)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 3.9 mg/L / 5.9 mg/L	Biochemical (Hormone(s)-Cortisol, Response Site: Serum)	LOEC (3.9 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Cardiovascular; Endocrine toxicity; Liver toxicology	Medium	3350208
84-74-2	70 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (66.0 (9.85-192) ug/L)	Development/Growth	High	10064186
84-74-2	70 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Physiology (Injury-Papilloma, wart, Response Site: Fin)	NOEC (305 (12.0-727) ug/L)	Skin and Connective Tissue	High	10064186

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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
84-74-2	98 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 2nd generation), Both (Measured in: male, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Physiology (Injury-Papilloma, wart, Response Site: Fin)	NOEC (305 (12.0-727) ug/L)	Skin and Connective Tissue	High	10064186
84-74-2	28-63 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: F1 generation), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F1 generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Reproduction (Reproduction-Hatch, Response Site: Embryo)	LOEC (15.6 (4.41-36.7) ug/L)	Reproductive/Teratogenic	High	10064186
84-74-2	98 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (38.7 (3.48-69.1) ug/L)	Development/Growth	High	10064186

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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
84-74-2	98 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (38.7 (3.48-69.1) ug/L)	Development/Growth	High	10064186
84-74-2	70 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (38.7 (3.48-69.1) ug/L)	Development/Growth	High	10064186
84-74-2	70 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (38.7 (3.48-69.1) ug/L)	Development/Growth	High	10064186

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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
84-74-2	70 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (38.7 (3.48-69.1) ug/L)	Development/Growth	High	10064186
84-74-2	70 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (38.7 (3.48-69.1) ug/L)	Development/Growth	High	10064186
84-74-2	112 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (38.7 (3.48-69.1) ug/L)	Development/Growth	High	10064186

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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
84-74-2	98 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 2nd generation), Both (Measured in: male, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (305 (12.0-727) ug/L)	Development/Growth	High	10064186
84-74-2	70 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (305 (12.0-727) ug/L)	Development/Growth	High	10064186
84-74-2	70 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Liver)	LOEC (305 (12.0-727) ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Endocrine toxicity; Reproductive/Teratogenic	High	10064186

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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
84-74-2	56 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Liver)	LOEC (305 (12.0-727) ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Endocrine toxicity; Reproductive/Teratogenic	High	10064186
84-74-2	28-63 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: F1 generation), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F1 generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Reproduction (Reproduction-Hatch, Response Site: Embryo)	LOEC (305 (12.0-727) ug/L)	Reproductive/Teratogenic	High	10064186
84-74-2	28-63 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: F2 generation), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F2 generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (66.0 (9.85-192) ug/L)	Mortality	High	10064186

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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
84-74-2	70 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (15.6 (4.41-36.7) ug/L)	Development/Growth	High	10064186
84-74-2	112 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (15.6 (4.41-36.7) ug/L)	Development/Growth	High	10064186
84-74-2	98 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 2nd generation), Both (Measured in: male, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (103 (26.7-290) ug/L)	Development/Growth	High	10064186

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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
84-74-2	70 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (103 (26.7-290) ug/L)	Development/Growth	High	10064186
84-74-2	70 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Liver)	NOEC (103 (26.7-290) ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Endocrine toxicity; Reproductive/Teratogenic	High	10064186
84-74-2	56 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Physiology (Injury-Papilloma, wart, Response Site: Fin)	NOEC (305 (12.0-727) ug/L)	Skin and Connective Tissue	High	10064186

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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
84-74-2	56 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Liver)	NOEC (103 (26.7-290) ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Endocrine toxicity; Reproductive/Teratogenic	High	10064186
84-74-2	56 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Physiology (Injury-Papilloma, wart, Response Site: Fin)	NOEC (15.6 (4.41-36.7) ug/L)	Skin and Connective Tissue	High	10064186
84-74-2	70 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 2nd generation), Both (Measured in: male, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Physiology (Injury-Papilloma, wart, Response Site: Fin)	NOEC (103 (26.7-290) ug/L)	Skin and Connective Tissue	High	10064186

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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
84-74-2	112 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (66.0 (9.85-192) ug/L)	Development/Growth	High	10064186
84-74-2	70 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 2nd generation), Both (Measured in: male, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Liver)	NOEC (66.0 (9.85-192) ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Endocrine toxicity; Reproductive/Teratogenic	High	10064186
84-74-2	70 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (38.7 (3.48-69.1) ug/L)	Development/Growth	High	10064186

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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
84-74-2	98 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: F2 generation), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F2 generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (305 (12.0-727) ug/L)	Mortality	High	10064186
84-74-2	112 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (66.0 (9.85-192) ug/L)	Development/Growth	High	10064186
84-74-2	28-63 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: F2 generation), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F2 generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (38.7 (3.48-69.1) ug/L)	Mortality	High	10064186

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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
84-74-2	98 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: F2 generation), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F2 generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (305 (12.0-727) ug/L)	Mortality	High	10064186
84-74-2	70 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (15.6 (4.41-36.7) ug/L)	Development/Growth	High	10064186
84-74-2	28 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: F1 generation), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F1 generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (305 (12.0-727) ug/L)	Mortality	High	10064186

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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
84-74-2	28 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: F2 generation), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F2 generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (305 (12.0-727) ug/L)	Mortality	High	10064186
84-74-2	28-63 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: F1 generation), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F1 generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (305 (12.0-727) ug/L)	Mortality	High	10064186
84-74-2	56 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Liver)	NOEC (305 (12.0-727) ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Endocrine toxicity; Reproductive/Teratogenic	High	10064186

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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
84-74-2	56 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: F1 generation), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F1 generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Population (Population-Sex ratio, Response Site: Not reported)	NOEC (305 (12.0-727) ug/L)	Reproductive/Teratogenic	High	10064186
84-74-2	63-112 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: F1 generation), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F1 generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (305 (12.0-727) ug/L)	Mortality	High	10064186
84-74-2	98 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Physiology (Injury-Papilloma, wart, Response Site: Fin)	LOEC (305 (12.0-727) ug/L)	Skin and Connective Tissue	High	10064186

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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
84-74-2	112 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Physiology (Injury-Papilloma, wart, Response Site: Fin)	LOEC (305 (12.0-727) ug/L)	Skin and Connective Tissue	High	10064186
84-74-2	112 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Physiology (Injury-Papilloma, wart, Response Site: Fin)	LOEC (305 (12.0-727) ug/L)	Skin and Connective Tissue	High	10064186
84-74-2	70 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 2nd generation), Both (Measured in: male, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Physiology (Injury-Papilloma, wart, Response Site: Fin)	LOEC (305 (12.0-727) ug/L)	Skin and Connective Tissue	High	10064186

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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
84-74-2	56 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Physiology (Injury-Papilloma, wart, Response Site: Fin)	LOEC (38.7 (3.48-69.1) ug/L)	Skin and Connective Tissue	High	10064186
84-74-2	112 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Physiology (Injury-Papilloma, wart, Response Site: Fin)	NOEC (103 (26.7-290) ug/L)	Skin and Connective Tissue	High	10064186
84-74-2	112 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Physiology (Injury-Papilloma, wart, Response Site: Fin)	NOEC (103 (26.7-290) ug/L)	Skin and Connective Tissue	High	10064186

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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
84-74-2	98 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Physiology (Injury-Papilloma, wart, Response Site: Fin)	NOEC (103 (26.7-290) ug/L)	Skin and Connective Tissue	High	10064186
84-74-2	28-63 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: F1 generation), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F1 generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Reproduction (Reproduction-Hatch, Response Site: Embryo)	NOEC (103 (26.7-290) ug/L)	Reproductive/Teratogenic	High	10064186
84-74-2	70 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (15.6 (4.41-36.7) ug/L)	Development/Growth	High	10064186

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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
84-74-2	70 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 2nd generation), Both (Measured in: male, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (15.6 (4.41-36.7) ug/L)	Development/Growth	High	10064186
84-74-2	70 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 2nd generation), Both (Measured in: male, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Genetics-Vitellogenin mRNA, Response Site: Liver)	LOEC (103 (26.7-290) ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Endocrine toxicity; Reproductive/Teratogenic	High	10064186
84-74-2	98 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (15.6 (4.41-36.7) ug/L)	Development/Growth	High	10064186

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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
84-74-2	70 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 2nd generation), Both (Measured in: male, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (15.6 (4.41-36.7) ug/L)	Development/Growth	High	10064186
84-74-2	112 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (103 (26.7-290) ug/L)	Development/Growth	High	10064186
84-74-2	112 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (103 (26.7-290) ug/L)	Development/Growth	High	10064186

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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
84-74-2	112 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (15.6 (4.41-36.7) ug/L)	Development/Growth	High	10064186
84-74-2	70 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (15.6 (4.41-36.7) ug/L)	Development/Growth	High	10064186
84-74-2	98 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 2nd generation), Both (Measured in: male, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (15.6 (4.41-36.7) ug/L)	Development/Growth	High	10064186

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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
84-74-2	98 Days post fertilization, (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (15.6 (4.41-36.7) ug/L)	Development/Growth	High	10064186
84-74-2	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Multiple, 42-98 Days post fertilization (Measured in: Adult), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Adult	Unmeasured values (some measured values reported in article)	<1.68 ng/ml / <1.68 ng/ml / 33 ug/L / 65 ug/L / 130 ug/L / 250 ug/L / 500 ug/L / 1000 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NR (33-1000 ug/L)	Mortality	Medium	10064186
84-74-2	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Multiple, 42-98 Days post fertilization (Measured in: Juvenile), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Juvenile	Unmeasured values (some measured values reported in article)	<1.68 ng/ml / <1.68 ng/ml / 33 ug/L / 65 ug/L / 130 ug/L / 250 ug/L / 500 ug/L / 1000 ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NR (33-1000 ug/L)	Mortality	Medium	10064186

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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
84-74-2	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Multiple, 42-98 Days post fertilization, Both (Measured in: Female organisms), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Female organisms	Unmeasured values (some measured values reported in article)	<1.68 ng/ml / <1.68 ng/ml / 33 ug/L / 65 ug/L / 130 ug/L / 250 ug/L / 500 ug/L / 1000 ug/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NR (33-1000 ug/L)	Reproductive/Teratogenic	Medium	10064186
84-74-2	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Multiple, 42-98 Days post fertilization (Measured in: Adult), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Adult	Unmeasured values (some measured values reported in article)	<1.68 ng/ml / <1.68 ng/ml / 33 ug/L / 65 ug/L / 130 ug/L / 250 ug/L / 500 ug/L / 1000 ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (1000 ug/L)	Mortality	Medium	10064186
84-74-2	21 Day(s), (21 Day(s))	*Oryzias latipes* (Japanese Medaka), Multiple, 42-98 Days post fertilization, Both (Measured in: Female organisms), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Female organisms	Unmeasured values (some measured values reported in article)	<1.68 ng/ml / <1.68 ng/ml / 33 ug/L / 65 ug/L / 130 ug/L / 250 ug/L / 500 ug/L / 1000 ug/L	Reproduction (Reproduction-Viability, Response Site: Egg)	NR (33-1000 ug/L)	Reproductive/Teratogenic	Medium	10064186

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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
84-74-2	28 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 0th (parental) generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (305 (12.0-727) ug/L)	Development/Growth	High	10064186
84-74-2	28 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 0th (parental) generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (305 (12.0-727) ug/L)	Development/Growth	High	10064186
84-74-2	28 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: F0 generation), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F0 generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (305 (12.0-727) ug/L)	Mortality	High	10064186

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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
84-74-2	28 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: F0 generation), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F0 generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Reproduction (Reproduction-Fertilization, Response Site: Egg)	NOEC (305 (12.0-727) ug/L)	Reproductive/Teratogenic	High	10064186
84-74-2	28 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 0th (parental) generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	LOEC (103 (26.7-290) ug/L)	Reproductive/Teratogenic	High	10064186
84-74-2	28 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 0th (parental) generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (305 (12.0-727) ug/L)	Development/Growth	High	10064186

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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
84-74-2	28 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 0th (parental) generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (305 (12.0-727) ug/L)	Development/Growth	High	10064186
84-74-2	28 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: F0 generation), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F0 generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (305 (12.0-727) ug/L)	Mortality	High	10064186
84-74-2	28 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 0th (parental) generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEC (66.0 (9.85-192) ug/L)	Reproductive/Teratogenic	High	10064186

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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
84-74-2	70 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: F2 generation), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F2 generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Population (Population-Sex ratio, Response Site: Not reported)	NOEC (305 (12.0-727) ug/L)	Reproductive/Teratogenic	High	10064186
84-74-2	99-119 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEC (103 (26.7-290) ug/L)	Reproductive/Teratogenic	High	10064186
84-74-2	99-119 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Reproduction (Reproduction-Fertility, Response Site: Not reported)	NOEC (103 (26.7-290) ug/L)	Reproductive/Teratogenic	High	10064186

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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
84-74-2	99-119 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	LOEC (305 (12.0-727) ug/L)	Reproductive/Teratogenic	High	10064186
84-74-2	99-119 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Reproduction (Reproduction-Fertility, Response Site: Not reported)	LOEC (305 (12.0-727) ug/L)	Reproductive/Teratogenic	High	10064186
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Dilation, Response Site: Kidney)	LOEC (103 (26.7-290) ug/L)	Renal/Kidney	High	10064186

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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
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Anisokaryosis, Response Site: Liver)	LOEC (305 (12.0-727) ug/L)	Hepatic/Liver	High	10064186
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Debris, Response Site: Kidney)	NOEC (103 (26.7-290) ug/L)	Renal/Kidney	High	10064186
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Inflammation, Response Site: Liver)	NOEC (103 (26.7-290) ug/L)	Hepatic/Liver	High	10064186

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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
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Reproduction (Reproduction-Atretic follicle stage, Response Site: Ovaries)	NOEC (66.0 (9.85-192) ug/L)	Reproductive/Teratogenic	High	10064186
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Dilation, Response Site: Kidney)	NOEC (66.0 (9.85-192) ug/L)	Renal/Kidney	High	10064186
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Morphology-Stage, Response Site: Testes)	NOEC (103 (26.7-290) ug/L)	Development/Growth	High	10064186

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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
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Hyperplasia, Response Site: Thyroid)	LOEC (15.6 (4.41-36.7) ug/L)	Endocrine	High	10064186
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Hyperplasia, Response Site: Thyroid)	NOEC (305 (12.0-727) ug/L)	Endocrine	High	10064186
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Debris, Response Site: Kidney)	LOEC (305 (12.0-727) ug/L)	Renal/Kidney	High	10064186

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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
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Histological changes, general, Response Site: Liver)	NOEC (305 (12.0-727) ug/L)	Hepatic/Liver	High	10064186
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Dilation, Response Site: Kidney)	NOEC (305 (12.0-727) ug/L)	Renal/Kidney	High	10064186
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Histological changes, general, Response Site: Testes)	NOEC (66.0 (9.85-192) ug/L)	Reproductive/Teratogenic	High	10064186

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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
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Degeneration, Response Site: Liver)	NOEC (305 (12.0-727) ug/L)	Hepatic/Liver	High	10064186
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Degeneration, Response Site: Liver)	NOEC (305 (12.0-727) ug/L)	Hepatic/Liver	High	10064186
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Reproduction (Reproduction-Atretic follicle stage, Response Site: Ovaries)	LOEC (103 (26.7-290) ug/L)	Reproductive/Teratogenic	High	10064186

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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
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Dilation, Response Site: Liver)	NOEC (103 (26.7-290) ug/L)	Hepatic/Liver	High	10064186
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Histological changes, general, Response Site: Liver)	LOEC (305 (12.0-727) ug/L)	Hepatic/Liver	High	10064186
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Morphology-Stage, Response Site: Testes)	LOEC (305 (12.0-727) ug/L)	Development/Growth	High	10064186

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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
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Degeneration, Response Site: Thyroid)	NOEC (305 (12.0-727) ug/L)	Endocrine	High	10064186
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Dilation, Response Site: Liver)	LOEC (305 (12.0-727) ug/L)	Hepatic/Liver	High	10064186
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Inflammation, Response Site: Liver)	LOEC (305 (12.0-727) ug/L)	Hepatic/Liver	High	10064186

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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
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Degeneration, Response Site: Thyroid)	NOEC (305 (12.0-727) ug/L)	Endocrine	High	10064186
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Anisokaryosis, Response Site: Liver)	NOEC (305 (12.0-727) ug/L)	Hepatic/Liver	High	10064186
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Dilation, Response Site: Liver)	NOEC (103 (26.7-290) ug/L)	Hepatic/Liver	High	10064186

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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
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Debris, Response Site: Kidney)	NOEC (305 (12.0-727) ug/L)	Renal/Kidney	High	10064186
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Histological changes, general, Response Site: Liver)	NOEC (103 (26.7-290) ug/L)	Hepatic/Liver	High	10064186
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Hyperplasia, Response Site: Thyroid)	LOEC (305 (12.0-727) ug/L)	Endocrine	High	10064186

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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
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 1st generation), Both (Measured in: female, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Inflammation, Response Site: Liver)	NOEC (103 (26.7-290) ug/L)	Hepatic/Liver	High	10064186
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Anisokaryosis, Response Site: Liver)	NOEC (103 (26.7-290) ug/L)	Hepatic/Liver	High	10064186
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Histological changes, general, Response Site: Testes)	LOEC (103 (26.7-290) ug/L)	Reproductive/Teratogenic	High	10064186

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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
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Hyperplasia, Response Site: Thyroid)	NOEC (103 (26.7-290) ug/L)	Endocrine	High	10064186
84-74-2	134 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 1st generation), Both (Measured in: male, 1st generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 1st generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Dilation, Response Site: Liver)	LOEC (305 (12.0-727) ug/L)	Hepatic/Liver	High	10064186
84-74-2	197-217 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEC (305 (12.0-727) ug/L)	Reproductive/Teratogenic	High	10064186

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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
84-74-2	197-217 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Reproduction (Reproduction-Fertility, Response Site: Not reported)	NOEC (305 (12.0-727) ug/L)	Reproductive/Teratogenic	High	10064186
84-74-2	120-218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: F2 generation), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F2 generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Reproduction (Reproduction-Hatch, Response Site: Embryo)	NOEC (66.0 (9.85-192) ug/L)	Reproductive/Teratogenic	High	10064186
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 2nd generation), Both (Measured in: male, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Vacuolization, Response Site: Liver)	LOEC (103 (26.7-290) ug/L)	Hepatic/Liver	High	10064186

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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
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Morphology-Stage, Response Site: Ovaries)	NOEC (305 (12.0-727) ug/L)	Development/Growth	High	10064186
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Atresia, Response Site: Oocyte)	LOEC (103 (26.7-290) ug/L)	Reproductive/Teratogenic	High	10064186
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Atresia, Response Site: Oocyte)	NOEC (66.0 (9.85-192) ug/L)	Reproductive/Teratogenic	High	10064186

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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
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 2nd generation), Both (Measured in: male, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Growth (Morphology-Stage, Response Site: Testes)	NOEC (305 (12.0-727) ug/L)	Development/Growth	High	10064186
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: F2 generation), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F2 generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Vacuolization, Response Site: Liver)	NOEC (305 (12.0-727) ug/L)	Hepatic/Liver	High	10064186
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Cytoplasmic inclusions, Response Site: Liver)	NOEC (66.0 (9.85-192) ug/L)	Hepatic/Liver	High	10064186

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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
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Cytoplasmic inclusions, Response Site: Liver)	LOEC (103 (26.7-290) ug/L)	Hepatic/Liver	High	10064186
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 2nd generation), Both (Measured in: male, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Vacuolization, Response Site: Liver)	NOEC (66.0 (9.85-192) ug/L)	Hepatic/Liver	High	10064186
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Inflammation, Response Site: Kidney)	NOEC (103 (26.7-290) ug/L)	Renal/Kidney	High	10064186

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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
84-74-2	120-218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: F2 generation), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F2 generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Reproduction (Reproduction-Hatch, Response Site: Embryo)	LOEC (103 (26.7-290) ug/L)	Reproductive/Teratogenic	High	10064186
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 2nd generation), Both (Measured in: male, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Dilation, Response Site: Liver)	NOEC (103 (26.7-290) ug/L)	Hepatic/Liver	High	10064186
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 2nd generation), Both (Measured in: male, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Degeneration, Response Site: Liver)	NOEC (103 (26.7-290) ug/L)	Hepatic/Liver	High	10064186

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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
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Degeneration, Response Site: Liver)	NOEC (103 (26.7-290) ug/L)	Hepatic/Liver	High	10064186
84-74-2	120-218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: F2 generation), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F2 generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Reproduction (Reproduction-Hatch, Response Site: Embryo)	NOEC (15.6 (4.41-36.7) ug/L)	Reproductive/Teratogenic	High	10064186
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Reproduction (Reproduction-Atretic follicle stage, Response Site: Ovaries)	NOEC (15.6 (4.41-36.7) ug/L)	Reproductive/Teratogenic	High	10064186

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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
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Dilation, Response Site: Liver)	NOEC (305 (12.0-727) ug/L)	Hepatic/Liver	High	10064186
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Degeneration, Response Site: Liver)	LOEC (305 (12.0-727) ug/L)	Hepatic/Liver	High	10064186
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 2nd generation), Both (Measured in: male, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Dilation, Response Site: Liver)	LOEC (305 (12.0-727) ug/L)	Hepatic/Liver	High	10064186

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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
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Inflammation, Response Site: Kidney)	LOEC (305 (12.0-727) ug/L)	Renal/Kidney	High	10064186
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 2nd generation), Both (Measured in: male, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Physiology (Physiology-Minerialization, Response Site: Kidney)	LOEC (305 (12.0-727) ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Endocrine toxicity; Reproductive/Teratogenic	High	10064186
84-74-2	120-218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: F2 generation), Both, Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA F2 generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Reproduction (Reproduction-Hatch, Response Site: Embryo)	LOEC (38.7 (3.48-69.1) ug/L)	Reproductive/Teratogenic	High	10064186

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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
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Reproduction (Reproduction-Atretic follicle stage, Response Site: Ovaries)	LOEC (38.7 (3.48-69.1) ug/L)	Reproductive/Teratogenic	High	10064186
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 2nd generation), Both (Measured in: male, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Cytoplasmic inclusions, Response Site: Liver)	NOEC (305 (12.0-727) ug/L)	Hepatic/Liver	High	10064186
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Physiology (Physiology-Minerialization, Response Site: Kidney)	LOEC (103 (26.7-290) ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Endocrine toxicity; Reproductive/Teratogenic	High	10064186

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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
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 2nd generation), Both (Measured in: male, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Physiology (Physiology-Minerialization, Response Site: Kidney)	NOEC (103 (26.7-290) ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Endocrine toxicity; Reproductive/Teratogenic	High	10064186
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 2nd generation), Both (Measured in: male, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Histological changes, general, Response Site: Kidney)	NOEC (305 (12.0-727) ug/L)	Renal/Kidney	High	10064186
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Physiology (Physiology-Minerialization, Response Site: Kidney)	NOEC (66.0 (9.85-192) ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Endocrine toxicity; Reproductive/Teratogenic	High	10064186

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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
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: male, 2nd generation), Both (Measured in: male, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA male, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Inflammation, Response Site: Kidney)	NOEC (305 (12.0-727) ug/L)	Renal/Kidney	High	10064186
84-74-2	218 Day(s), (218 Day(s))	*Oryzias latipes* (Japanese Medaka), Adult, ~18 Week(s) (Measured in: female, 2nd generation), Both (Measured in: female, 2nd generation), Laboratory (OBTAINED FROM EAG INC., EASTON, MARYLAND)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA female, 2nd generation	Measured	<3.50 ug/L / <3.50 ug/L / 15.6 (4.41-36.7) ug/L / 38.7 (3.48-69.1) ug/L / 66.0 (9.85-192) ug/L / 103 (26.7-290) ug/L / 305 (12.0-727) ug/L	Cellular (Histology-Histological changes, general, Response Site: Kidney)	NOEC (305 (12.0-727) ug/L)	Renal/Kidney	High	10064186
84-74-2	<=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	Measured	0 mg/L / 0 mg/L / 0.067 mg/L / 0.135 mg/L / 0.337 mg/L / 0.674 mg/L	Growth (Morphology-enlargement, Response Site: Urinary bladder)	EC50 (0.224 mg/L)	Renal/Kidney	High	5489073

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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
84-74-2	<=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	Measured	0 mg/L / 0 mg/L / 0.674 mg/L / 0.741 mg/L / 0.809 mg/L / 1.011 mg/L / 1.348 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (0.82 mg/L)	Mortality	High	5489073
84-74-2	<=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	Measured	0 mg/L / 0 mg/L / 0.674 mg/L / 0.741 mg/L / 0.809 mg/L / 1.011 mg/L / 1.348 mg/L	Cellular (Histology-Congestion,Edema,Hemorrhage, Response Site: Whole organism)	NR (0.674-1.348 mg/L)	Cardiovascular	Uninformative	5489073
84-74-2	<=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, 10 Organism	Measured	0 mg/L / 0 mg/L / 0.674 mg/L / 0.741 mg/L / 0.809 mg/L / 1.011 mg/L / 1.348 mg/L	Mortality (Mortality-Hatch, Response Site: Not reported)	NR (0.674-1.348 mg/L)	Mortality	High	5489073

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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
84-74-2	<=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, 10 Organism	Measured	0 mg/L / 0 mg/L / 0.674 mg/L / 0.741 mg/L / 0.809 mg/L / 1.011 mg/L / 1.348 mg/L	Growth (Morphology-enlargement, Response Site: Urinary bladder)	NR (0.674-1.348 mg/L)	Development/Growth	Uninformative	5489073
84-74-2	<=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	Measured	0 mg/L / 0 mg/L / 0.674 mg/L / 0.741 mg/L / 0.809 mg/L / 1.011 mg/L / 1.348 mg/L	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	NR (0.674-1.348 mg/L)	Development/Growth	Uninformative	5489073
84-74-2	<=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, 13-14 Organism	Measured	0 mg/L / 0 mg/L / 0.067 mg/L / 0.135 mg/L / 0.337 mg/L / 0.674 mg/L	Mortality (Mortality-Hatch,Survival, Response Site: Not reported)	NR (0.067-0.674 mg/L)	Mortality	High	5489073

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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
84-74-2	<=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	Measured	0 mg/L / 0 mg/L / 0.674 mg/L / 0.741 mg/L / 0.809 mg/L / 1.011 mg/L / 1.348 mg/L	Physiology (Physiology-Blood flow,Emaciation, emaciated, Response Site: Not reported)	NR (0.674-1.348 mg/L)	Cardiovascular	Uninformative	5489073
84-74-2	<=180 Day(s), (540 Day(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 14 Days post-hatch (Measured in: F0 generation), Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Oral (diet, drink, gavage), Food, 22 F0 generation	Unmeasured	0 mg/kg bdwt/d / 12 mg/kg bdwt/d / 65 mg/kg bdwt/d / 776 mg/kg bdwt/d	Growth (Morphology-Weight, Response Site: Gonad(s))	NOEC (776 mg/kg bdwt/d)	Development/Growth	High	5489073

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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
84-74-2	<=180 Day(s), (540 Day(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 14 Days post-hatch (Measured in: F0 generation), Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Oral (diet, drink, gavage), Food, 28 F0 generation	Unmeasured	0 mg/kg bdwt/d / 12 mg/kg bdwt/d / 65 mg/kg bdwt/d / 776 mg/kg bdwt/d	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (776 mg/kg bdwt/d)	Development/Growth	High	5489073
84-74-2	<=180 Day(s), (540 Day(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 14 Days post-hatch (Measured in: F0 generation), Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Oral (diet, drink, gavage), Food, 22 F0 generation	Unmeasured	0 mg/kg bdwt/d / 12 mg/kg bdwt/d / 65 mg/kg bdwt/d / 776 mg/kg bdwt/d	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Gonad(s))	NR (12-776 mg/kg bdwt/d)	Development/Growth	High	5489073

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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
84-74-2	<=180 Day(s), (540 Day(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 14 Days post-hatch (Measured in: F0 generation), Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Oral (diet, drink, gavage), Food, NA F0 generation	Unmeasured	0 mg/kg bdwt/d / 12 mg/kg bdwt/d / 65 mg/kg bdwt/d / 776 mg/kg bdwt/d	Biochemical (Biochemistry-Vitellogenin, Response Site: Whole organism)	NR (12-776 mg/kg bdwt/d)	Mechanistic: Biomarkers (exposure and effect)	Low	5489073
84-74-2	<=180 Day(s), (540 Day(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 14 Days post-hatch, Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Oral (diet, drink, gavage), Food, NA Female organisms	Unmeasured	0 mg/kg bdwt/d / 12 mg/kg bdwt/d / 65 mg/kg bdwt/d / 776 mg/kg bdwt/d	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Whole organism)	NR (12-776 mg/kg bdwt/d)	Reproductive/Teratogenic	High	5489073

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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
84-74-2	<=180 Day(s), (540 Day(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 14 Days post-hatch, Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Oral (diet, drink, gavage), Food, NA Female organisms	Unmeasured	0 mg/kg bdwt/d / 12 mg/kg bdwt/d / 65 mg/kg bdwt/d / 776 mg/kg bdwt/d	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Whole organism)	LOEC (12 mg/kg bdwt/d)	Reproductive/Teratogenic	High	5489073
84-74-2	<=180 Day(s), (540 Day(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 14 Days post-hatch (Measured in: F0 generation), Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Oral (diet, drink, gavage), Food, NA F0 generation	Unmeasured	0 mg/kg bdwt/d / 12 mg/kg bdwt/d / 65 mg/kg bdwt/d / 776 mg/kg bdwt/d	Cellular (Histology-Lesions, Response Site: Whole organism)	NR (12-776 mg/kg bdwt/d)	Development/Growth	Uninformative	5489073

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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
84-74-2	<=360 Day(s), (540 Day(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 14 Days post-hatch (Measured in: F1 generation), Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Oral (diet, drink, gavage), Food, NA F1 generation	Unmeasured	0 mg/kg bdwt/d / 12 mg/kg bdwt/d / 65 mg/kg bdwt/d / 776 mg/kg bdwt/d	Cellular (Histology-Congestion,Degeneration, Response Site: Kidney)	NR (12-776 mg/kg bdwt/d)	Renal/Kidney	Low	5489073
84-74-2	<=360 Day(s), (540 Day(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 14 Days post-hatch (Measured in: male, 1st generation), Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Oral (diet, drink, gavage), Food, 13 male, 1st generation	Unmeasured	0 mg/kg bdwt/d / 12 mg/kg bdwt/d / 65 mg/kg bdwt/d / 776 mg/kg bdwt/d	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (776 mg/kg bdwt/d)	Development/Growth	High	5489073

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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
84-74-2	<=360 Day(s), (540 Day(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 14 Days post-hatch (Measured in: F1 generation), Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Oral (diet, drink, gavage), Food, NA F1 generation	Unmeasured	0 mg/kg bdwt/d / 12 mg/kg bdwt/d / 65 mg/kg bdwt/d / 776 mg/kg bdwt/d	Reproduction (Reproduction-Germ cell count,Fully developed oocytes,Previtellogenic oocyte,Sperm cell counts, Response Site: Kidney)	NR (12-776 mg/kg bdwt/d)	Reproductive/Teratogenic	High	5489073
84-74-2	<=360 Day(s), (540 Day(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 14 Days post-hatch (Measured in: F1 generation), Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Oral (diet, drink, gavage), Food, NA F1 generation	Unmeasured	0 mg/kg bdwt/d / 12 mg/kg bdwt/d / 65 mg/kg bdwt/d / 776 mg/kg bdwt/d	Biochemical (Biochemistry-Vitellogenin, Response Site: Not reported)	NR (12-776 mg/kg bdwt/d)	Mechanistic: Biomarkers (exposure and effect)	Low	5489073

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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
84-74-2	<=360 Day(s), (540 Day(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 14 Days post-hatch (Measured in: female, 1st generation), Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Oral (diet, drink, gavage), Food, 13-16 female, 1st generation	Unmeasured	0 mg/kg bdwt/d / 12 mg/kg bdwt/d / 65 mg/kg bdwt/d / 776 mg/kg bdwt/d	Growth (Growth-Weight, Response Site: Whole organism)	NR (12-776 mg/kg bdwt/d)	Development/Growth	High	5489073
84-74-2	<=360 Day(s), (540 Day(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 14 Days post-hatch (Measured in: female, 1st generation), Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Oral (diet, drink, gavage), Food, NA female, 1st generation	Unmeasured	0 mg/kg bdwt/d / 12 mg/kg bdwt/d / 65 mg/kg bdwt/d / 776 mg/kg bdwt/d	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NR (12-776 mg/kg bdwt/d)	Reproductive/Teratogenic	High	5489073

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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
84-74-2	<=360 Day(s), (540 Day(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 14 Days post-hatch (Measured in: F1 generation), Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Oral (diet, drink, gavage), Food, NA F1 generation	Unmeasured	0 mg/kg bdwt/d / 12 mg/kg bdwt/d / 65 mg/kg bdwt/d / 776 mg/kg bdwt/d	Growth (Morphology-Organ weight in relationship to body weight,Weight, Response Site: Gonad(s))	NR (12-776 mg/kg bdwt/d)	Development/Growth	High	5489073
84-74-2	<=540 Day(s), (540 Day(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 14 Days post-hatch (Measured in: F2 generation), Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Oral (diet, drink, gavage), Food, 26 F2 generation	Unmeasured	0 mg/kg bdwt/d / 12 mg/kg bdwt/d / 65 mg/kg bdwt/d / 776 mg/kg bdwt/d	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Gonad(s))	NOEC (65 mg/kg bdwt/d)	Development/Growth	High	5489073

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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
84-74-2	<=540 Day(s), (540 Day(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 14 Days post-hatch (Measured in: female, 2nd generation), Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Oral (diet, drink, gavage), Food, NA female, 2nd generation	Unmeasured	0 mg/kg bdwt/d / 12 mg/kg bdwt/d / 65 mg/kg bdwt/d / 776 mg/kg bdwt/d	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Whole organism)	NOEC (65 mg/kg bdwt/d)	Reproductive/Teratogenic	High	5489073
84-74-2	<=540 Day(s), (540 Day(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 14 Days post-hatch (Measured in: F2 generation), Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Oral (diet, drink, gavage), Food, NA F2 generation	Unmeasured	0 mg/kg bdwt/d / 12 mg/kg bdwt/d / 65 mg/kg bdwt/d / 776 mg/kg bdwt/d	Biochemical (Biochemistry-Vitellogenin, Response Site: Not reported)	NR (12-65 mg/kg bdwt/d)	Mechanistic: Biomarkers (exposure and effect)	Low	5489073

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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
84-74-2	<=540 Day(s), (540 Day(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 14 Days post-hatch (Measured in: F2 generation), Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Oral (diet, drink, gavage), Food, NA F2 generation	Unmeasured	0 mg/kg bdwt/d / 12 mg/kg bdwt/d / 65 mg/kg bdwt/d / 776 mg/kg bdwt/d	Cellular (Histology-Lesions, Response Site: Not reported)	NR (12-65 mg/kg bdwt/d)	Development/Growth	Uninformative	5489073
84-74-2	<=540 Day(s), (540 Day(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 14 Days post-hatch (Measured in: F2 generation), Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Oral (diet, drink, gavage), Food, 11-15 F2 generation	Unmeasured	0 mg/kg bdwt/d / 12 mg/kg bdwt/d / 65 mg/kg bdwt/d / 776 mg/kg bdwt/d	Growth (Growth-Weight, Response Site: Whole organism)	NR (12-65 mg/kg bdwt/d)	Development/Growth	High	5489073

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84-74-2	<=540 Day(s), (540 Day(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 14 Days post-hatch (Measured in: F2 generation), Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Oral (diet, drink, gavage), Food, NA F2 generation	Unmeasured	0 mg/kg bdwt/d / 12 mg/kg bdwt/d / 65 mg/kg bdwt/d / 776 mg/kg bdwt/d	Growth (Morphology-Imposex, intersex conditions, Response Site: Not reported)	NR (12-65 mg/kg bdwt/d)	Reproductive/Teratogenic	High	5489073
84-74-2	<=540 Day(s), (540 Day(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 14 Days post-hatch (Measured in: F2 generation), Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Oral (diet, drink, gavage), Food, 10-16 F2 generation	Unmeasured	0 mg/kg bdwt/d / 12 mg/kg bdwt/d / 65 mg/kg bdwt/d / 776 mg/kg bdwt/d	Growth (Morphology-Weight, Response Site: Gonad(s))	NR (12-65 mg/kg bdwt/d)	Development/Growth	High	5489073

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84-74-2	<=540 Day(s), (540 Day(s))	*Oryzias latipes* (Japanese Medaka), Juvenile, 14 Days post-hatch (Measured in: F2 generation), Not Reported, Laboratory (ESTABLISHED BREEDING COLONY, ORIGINALLY SUPPLIED FROM CAROLINA BIOLOGICAL SUPPLY, BURLINGTON, NC)	Fresh water, Oral (diet, drink, gavage), Food, NA F2 generation	Unmeasured	0 mg/kg bdwt/d / 12 mg/kg bdwt/d / 65 mg/kg bdwt/d / 776 mg/kg bdwt/d	Population (Population-Sex ratio, Response Site: Not reported)	NR (12-65 mg/kg bdwt/d)	Reproductive/Teratogenic	High	5489073
84-74-2	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	Biochemical (Hormone(s)-Estrogen (Oestrogen), Response Site: Liver)	NR (0.01-1.50 ppm)	Mechanistic: Biomarkers (exposure and effect); Receptor binding/ regulation of receptor activity; Endocrine toxicity; Reproductive/Teratogenic	Medium	2298079
84-74-2	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)	NOEC (0.32 mg/L)	Mortality	High	1321996
84-74-2	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 (1.54 mg/L)	Mortality	High	1321996

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84-74-2	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 (0.92 mg/L)	Mortality	High	1321996
84-74-2	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)	NOEC (0.80 mg/L)	Mortality	High	1321996
84-74-2	24 Hour(s), (24 Hour(s))	*Pimephales promelas* (Fathead Minnow), Larva, 5 Days post fertilization, Not Reported, Laboratory (ON-SITE BREEDING CULTURE AT THE U.S. EPA ANDREW W. BREIDENBACH ENVIRONMENTAL RESEARCH CENTER (AWBERC) IN CINCINNATI, OHIO)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / <=0.00071 mg/L / 0.00089-0.0038 mg/L / 0.0055-0.018 mg/L / 0.035-0.054 mg/L / 0.11-0.14 mg/L / 0.35-0.37 mg/L / 0.82-0.87 mg/L / 2.0-2.1 mg/L / 3.6-3.7 mg/L	Biochemical (Biochemistry-Metabolome, Response Site: Not reported)	BMD10 (0.11 mg/L)	Mechanistic: Cell signaling/function	High	11581733

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84-74-2	24 Hour(s), (24 Hour(s))	*Pimephales promelas* (Fathead Minnow), Larva, 5 Days post fertilization, Not Reported, Laboratory (ON-SITE BREEDING CULTURE AT THE U.S. EPA ANDREW W. BREIDENBACH ENVIRONMENTAL RESEARCH CENTER (AWBERC) IN CINCINNATI, OHIO)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / <=0.00071 mg/L / 0.00089-0.0038 mg/L / 0.0055-0.018 mg/L / 0.035-0.054 mg/L / 0.11-0.14 mg/L / 0.35-0.37 mg/L / 0.82-0.87 mg/L / 2.0-2.1 mg/L / 3.6-3.7 mg/L	Cellular (Genetics-Gene expression, Response Site: Not reported)	BMDL (0.11-0.12 mg/L)	Mechanistic: Cell signaling/function	High	11581733
84-74-2	24 Hour(s), (24 Hour(s))	*Pimephales promelas* (Fathead Minnow), Larva, 5 Days post fertilization, Not Reported, Laboratory (ON-SITE BREEDING CULTURE AT THE U.S. EPA ANDREW W. BREIDENBACH ENVIRONMENTAL RESEARCH CENTER (AWBERC) IN CINCINNATI, OHIO)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / <=0.00071 mg/L / 0.00089-0.0038 mg/L / 0.0055-0.018 mg/L / 0.035-0.054 mg/L / 0.11-0.14 mg/L / 0.35-0.37 mg/L / 0.82-0.87 mg/L / 2.0-2.1 mg/L / 3.6-3.7 mg/L	Behavior (Behavior-Startle, Response Site: Not reported)	EC50 (0.24 mg/L)	Behavioral	High	11581733

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84-74-2	24 Hour(s), (24 Hour(s))	*Pimephales promelas* (Fathead Minnow), Larva, 5 Days post fertilization, Not Reported, Laboratory (ON-SITE BREEDING CULTURE AT THE U.S. EPA ANDREW W. BREIDENBACH ENVIRONMENTAL RESEARCH CENTER (AWBERC) IN CINCINNATI, OHIO)	Fresh water, Aqueous (aquatic habitat), Static, 13 Organism	Measured	0 mg/L / 0 mg/L / <=0.00071 mg/L / 0.00089-0.0038 mg/L / 0.0055-0.018 mg/L / 0.035-0.054 mg/L / 0.11-0.14 mg/L / 0.35-0.37 mg/L / 0.82-0.87 mg/L / 2.0-2.1 mg/L / 3.6-3.7 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEC (2.0-2.1 mg/L)	Mortality	High	11581733
84-74-2	24 Hour(s), (24 Hour(s))	*Pimephales promelas* (Fathead Minnow), Larva, 5 Days post fertilization, Not Reported, Laboratory (ON-SITE BREEDING CULTURE AT THE U.S. EPA ANDREW W. BREIDENBACH ENVIRONMENTAL RESEARCH CENTER (AWBERC) IN CINCINNATI, OHIO)	Fresh water, Aqueous (aquatic habitat), Static, 13 Organism	Measured	0 mg/L / 0 mg/L / <=0.00071 mg/L / 0.00089-0.0038 mg/L / 0.0055-0.018 mg/L / 0.035-0.054 mg/L / 0.11-0.14 mg/L / 0.35-0.37 mg/L / 0.82-0.87 mg/L / 2.0-2.1 mg/L / 3.6-3.7 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (0.82-0.87 mg/L)	Mortality	High	11581733

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84-74-2	24 Hour(s), (24 Hour(s))	*Pimephales promelas* (Fathead Minnow), Larva, 5 Days post fertilization, Not Reported, Laboratory (ON-SITE BREEDING CULTURE AT THE U.S. EPA ANDREW W. BREIDENBACH ENVIRONMENTAL RESEARCH CENTER (AWBERC) IN CINCINNATI, OHIO)	Fresh water, Aqueous (aquatic habitat), Static, 13 Organism	Measured	0 mg/L / 0 mg/L / <=0.00071 mg/L / 0.00089-0.0038 mg/L / 0.0055-0.018 mg/L / 0.035-0.054 mg/L / 0.11-0.14 mg/L / 0.35-0.37 mg/L / 0.82-0.87 mg/L / 2.0-2.1 mg/L / 3.6-3.7 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (0.82-0.87 mg/L)	Mortality	High	11581733
84-74-2	24 Hour(s), (24 Hour(s))	*Pimephales promelas* (Fathead Minnow), Larva, 5 Days post fertilization, Not Reported, Laboratory (ON-SITE BREEDING CULTURE AT THE U.S. EPA ANDREW W. BREIDENBACH ENVIRONMENTAL RESEARCH CENTER (AWBERC) IN CINCINNATI, OHIO)	Fresh water, Aqueous (aquatic habitat), Static, 13 Organism	Measured	0 mg/L / 0 mg/L / <=0.00071 mg/L / 0.00089-0.0038 mg/L / 0.0055-0.018 mg/L / 0.035-0.054 mg/L / 0.11-0.14 mg/L / 0.35-0.37 mg/L / 0.82-0.87 mg/L / 2.0-2.1 mg/L / 3.6-3.7 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-LETH (2.0-2.1 mg/L)	Mortality	High	11581733

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84-74-2	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	<0.0067 mg/L / <0.0067-0.94 mg/L / <0.0067-1.6 mg/L / <0.0067-2.5 mg/L / <0.0067-4.0 mg/L / 0.55-6.9 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-LETH (0.55-6.9 mg/L)	Mortality	Uninformative	1316188
84-74-2	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	<0.0067 mg/L / <0.0067-0.94 mg/L / <0.0067-1.6 mg/L / <0.0067-2.5 mg/L / <0.0067-4.0 mg/L / 0.55-6.9 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (3.0 (2.6-3.4) mg/L)	Mortality	Uninformative	1316188
84-74-2	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	<0.0067 mg/L / <0.0067-0.94 mg/L / <0.0067-1.6 mg/L / <0.0067-2.5 mg/L / <0.0067-4.0 mg/L / 0.55-6.9 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (3.0 (2.6-3.4) mg/L)	Mortality	Uninformative	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
84-74-2	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	<0.0067 mg/L / <0.0067-0.94 mg/L / <0.0067-1.6 mg/L / <0.0067-2.5 mg/L / <0.0067-4.0 mg/L / 0.55-6.9 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (3.0 (2.6-3.4) mg/L)	Mortality	Uninformative	1316188
84-74-2	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	<0.0067 mg/L / <0.0067-0.94 mg/L / <0.0067-1.6 mg/L / <0.0067-2.5 mg/L / <0.0067-4.0 mg/L / 0.55-6.9 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (<0.0067-2.5 mg/L)	Mortality	Uninformative	1316188
84-74-2	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	<0.0067 mg/L / <0.0067-0.94 mg/L / <0.0067-1.6 mg/L / <0.0067-2.5 mg/L / <0.0067-4.0 mg/L / 0.55-6.9 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (<0.0067-1.6 mg/L)	Mortality	Uninformative	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
84-74-2	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	<0.0067 mg/L / <0.0067-0.94 mg/L / <0.0067-1.6 mg/L / <0.0067-2.5 mg/L / <0.0067-4.0 mg/L / 0.55-6.9 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (3.0 (2.6-3.4) mg/L)	Mortality	Uninformative	1316188
84-74-2	24 Hour(s), (144 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	<0.0067 mg/L / 0.32 (0.18-0.57) mg/L / 0.68 (0.35-1.1) mg/L / 1.7 (0.70-2.4) mg/L / 3.6 (2.0-5.2) mg/L / 7.8 (5.8-8.9) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (1.6 (0.68-3.6) mg/L)	Mortality	High	1316189
84-74-2	24 Hour(s), (144 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	<0.0067 mg/L / 0.32 (0.18-0.57) mg/L / 0.68 (0.35-1.1) mg/L / 1.7 (0.70-2.4) mg/L / 3.6 (2.0-5.2) mg/L / 7.8 (5.8-8.9) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-LETH (3.6 (2.0-5.0) mg/L)	Mortality	High	1316189
84-74-2	48 Hour(s), (144 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	<0.0067 mg/L / 0.32 (0.18-0.57) mg/L / 0.68 (0.35-1.1) mg/L / 1.7 (0.70-2.4) mg/L / 3.6 (2.0-5.2) mg/L / 7.8 (5.8-8.9) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (1.2 (0.90-1.6) 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
84-74-2	72 Hour(s), (144 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	<0.0067 mg/L / 0.32 (0.18-0.57) mg/L / 0.68 (0.35-1.1) mg/L / 1.7 (0.70-2.4) mg/L / 3.6 (2.0-5.2) mg/L / 7.8 (5.8-8.9) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (1.1 (0.87-1.3) mg/L)	Mortality	High	1316189
84-74-2	120 Hour(s), (144 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	<0.0067 mg/L / 0.32 (0.18-0.57) mg/L / 0.68 (0.35-1.1) mg/L / 1.7 (0.70-2.4) mg/L / 3.6 (2.0-5.2) mg/L / 7.8 (5.8-8.9) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (0.92 (0.71-1.2) mg/L)	Mortality	High	1316189
84-74-2	144 Hour(s), (144 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	<0.0067 mg/L / 0.32 (0.18-0.57) mg/L / 0.68 (0.35-1.1) mg/L / 1.7 (0.70-2.4) mg/L / 3.6 (2.0-5.2) mg/L / 7.8 (5.8-8.9) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (<0.32 mg/L)	Mortality	High	1316189
84-74-2	144 Hour(s), (144 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	<0.0067 mg/L / 0.32 (0.18-0.57) mg/L / 0.68 (0.35-1.1) mg/L / 1.7 (0.70-2.4) mg/L / 3.6 (2.0-5.2) mg/L / 7.8 (5.8-8.9) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEC (0.32 (0.18-0.57) 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
84-74-2	144 Hour(s), (144 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	<0.0067 mg/L / 0.32 (0.18-0.57) mg/L / 0.68 (0.35-1.1) mg/L / 1.7 (0.70-2.4) mg/L / 3.6 (2.0-5.2) mg/L / 7.8 (5.8-8.9) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (0.92 (0.71-1.2) mg/L)	Mortality	High	1316189
84-74-2	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	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (1.1 (1.0-1.2) mg/L)	Mortality	High	5774391
84-74-2	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	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (0.85 (0.72-1.0) mg/L)	Mortality	High	5774391
84-74-2	48 Hour(s), (20 Day(s))	*Pimephales promelas* (Fathead Minnow), <48 Hour(s) (Measured in: Embryo), Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Embryo	Measured	<0.001 mg/L / <0.001 mg/L / 0.06 mg/L / 0.14 mg/L / 0.27 mg/L / 0.53 mg/L / 0.97 mg/L / 1.74 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.97 mg/L)	Mortality	Medium	1336024

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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
84-74-2	48 Hour(s), (20 Day(s))	*Pimephales promelas* (Fathead Minnow), <48 Hour(s) (Measured in: Embryo), Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Embryo	Measured	<0.001 mg/L / <0.001 mg/L / 0.06 mg/L / 0.14 mg/L / 0.27 mg/L / 0.53 mg/L / 0.97 mg/L / 1.74 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (1.74 mg/L)	Mortality	Medium	1336024
84-74-2	96 Hour(s), (96 Hour(s))	*Pimephales promelas* (Fathead Minnow), Fry, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.001 mg/L / <0.001 mg/L / 0.06 mg/L / 0.14 mg/L / 0.27 mg/L / 0.53 mg/L / 0.97 mg/L / 1.74 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (2.02 (1.32-2.85) mg/L)	Mortality	Medium	1336024
84-74-2	20 Day(s), (20 Day(s))	*Pimephales promelas* (Fathead Minnow), <48 Hour(s) (Measured in: Embryo), Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Embryo	Measured	<0.001 mg/L / <0.001 mg/L / 0.06 mg/L / 0.14 mg/L / 0.27 mg/L / 0.53 mg/L / 0.97 mg/L / 1.74 mg/L	Mortality (Mortality-Hatch, Response Site: Not reported)	NOEC (0.53 mg/L)	Mortality	Medium	1336024
84-74-2	20 Day(s), (20 Day(s))	*Pimephales promelas* (Fathead Minnow), <48 Hour(s) (Measured in: Embryo), Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Embryo	Measured	<0.001 mg/L / <0.001 mg/L / 0.06 mg/L / 0.14 mg/L / 0.27 mg/L / 0.53 mg/L / 0.97 mg/L / 1.74 mg/L	Mortality (Mortality-Hatch, Response Site: Not reported)	NOEC (0.97 mg/L)	Mortality	Medium	1336024
84-74-2	20 Day(s), (20 Day(s))	*Pimephales promelas* (Fathead Minnow), <48 Hour(s) (Measured in: Larvae), Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Larvae	Measured	<0.001 mg/L / <0.001 mg/L / 0.06 mg/L / 0.14 mg/L / 0.27 mg/L / 0.53 mg/L / 0.97 mg/L / 1.74 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NR (0.06-1.74 mg/L)	Mortality	Medium	1336024

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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
84-74-2	20 Day(s), (20 Day(s))	*Pimephales promelas* (Fathead Minnow), <48 Hour(s) (Measured in: Embryo), Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Embryo	Measured	<0.001 mg/L / <0.001 mg/L / 0.06 mg/L / 0.14 mg/L / 0.27 mg/L / 0.53 mg/L / 0.97 mg/L / 1.74 mg/L	Mortality (Mortality-Hatch, Response Site: Not reported)	LOEC (1.74 mg/L)	Mortality	Medium	1336024
84-74-2	20 Day(s), (20 Day(s))	*Pimephales promelas* (Fathead Minnow), <48 Hour(s) (Measured in: Embryo), Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Embryo	Measured	<0.001 mg/L / <0.001 mg/L / 0.06 mg/L / 0.14 mg/L / 0.27 mg/L / 0.53 mg/L / 0.97 mg/L / 1.74 mg/L	Mortality (Mortality-Hatch, Response Site: Not reported)	LOEC (0.97 mg/L)	Mortality	Medium	1336024
84-74-2	NA Not applicable, (Not Reported)	*Pimephales promelas* (Fathead Minnow), Not reported, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.13 mg/L / 0.25 mg/L / 0.50 mg/L / 1.0 mg/L / 5.0 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (0.13-5.0 mg/L)	Mortality	High	10064185
84-74-2	24 Hour(s), (24 Hour(s))	*Pimephales promelas* (Fathead Minnow), Not reported, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.25 mg/L / 0.50 mg/L / 1.0 mg/L / 5.0 mg/L / 10.0 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (0.25-10.0 mg/L)	Mortality	Medium	10064185
84-74-2	24 Hour(s), (24 Hour(s))	*Pimephales promelas* (Fathead Minnow), Not reported, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.25 mg/L / 0.50 mg/L / 1.0 mg/L / 5.0 mg/L / 10.0 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-LETH (5.0 mg/L)	Mortality	Medium	10064185

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84-74-2	48 Hour(s), (96 Hour(s))	*Pimephales promelas* (Fathead Minnow), Not reported, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Flow-through, 6 Organism	Measured	<0.044-<0.046 mg/L / <0.044-<0.046 mg/L / 0.38 (0.31-0.44) mg/L / 0.53 (0.41-0.66) mg/L / 1.4 (1.1-1.7) mg/L / 2.8 (2.2-3.4) mg/L / 4.8 (3.9-5.6) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-LETH (1.4 (1.1-1.7) mg/L)	Mortality	Medium	10064185
84-74-2	96 Hour(s), (96 Hour(s))	*Pimephales promelas* (Fathead Minnow), Not reported, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Flow-through, 6 Organism	Measured	<0.044-<0.046 mg/L / <0.044-<0.046 mg/L / 0.38 (0.31-0.44) mg/L / 0.53 (0.41-0.66) mg/L / 1.4 (1.1-1.7) mg/L / 2.8 (2.2-3.4) mg/L / 4.8 (3.9-5.6) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (0.53 (0.41-0.66) mg/L)	Mortality	Medium	10064185
84-74-2	96 Hour(s), (96 Hour(s))	*Pimephales promelas* (Fathead Minnow), Not reported, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Flow-through, 6 Organism	Measured	<0.044-<0.046 mg/L / <0.044-<0.046 mg/L / 0.38 (0.31-0.44) mg/L / 0.53 (0.41-0.66) mg/L / 1.4 (1.1-1.7) mg/L / 2.8 (2.2-3.4) mg/L / 4.8 (3.9-5.6) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEC (1.4 (1.1-1.7) mg/L)	Mortality	Medium	10064185

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84-74-2	96 Hour(s), (96 Hour(s))	*Pimephales promelas* (Fathead Minnow), Not reported, Not Reported, Laboratory (NR)	Fresh water, Aqueous (aquatic habitat), Flow-through, 6 Organism	Measured	<0.044-<0.046 mg/L / <0.044-<0.046 mg/L / 0.38 (0.31-0.44) mg/L / 0.53 (0.41-0.66) mg/L / 1.4 (1.1-1.7) mg/L / 2.8 (2.2-3.4) mg/L / 4.8 (3.9-5.6) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (1.0 mg/L)	Mortality	Medium	10064185
84-74-2	21 Day(s), (21 Day(s))	*Pimephales promelas* (Fathead Minnow), Mature reproductive, ~24.4 Week(s), Both, Laboratory (SMITHERS VISCIENT, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, 23-24 Organism	Measured	<1.6-<3.0 ug/L / <1.6-<3.0 ug/L / 5.1 (4.4-7.5) ug/L / 12 (10-20) ug/L / 32 (24-56) ug/L / 62 (40-109) ug/L	Physiology (Physiology-Respiratory rate, Response Site: Not reported)	NR (5.1-62 ug/L)	Behavioral	High	10064185
84-74-2	21 Day(s), (21 Day(s))	*Pimephales promelas* (Fathead Minnow), Mature reproductive, ~24.4 Week(s), Both (Measured in: Male organisms), Laboratory (SMITHERS VISCIENT, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, 8 Male organisms	Measured	<1.6-<3.0 ug/L / <1.6-<3.0 ug/L / 5.1 (4.4-7.5) ug/L / 12 (10-20) ug/L / 32 (24-56) ug/L / 62 (40-109) ug/L	Biochemical (Biochemistry-Vitellogenin, Response Site: Plasma)	NOEC (62 (40-109) ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Reproductive/Teratogenic	High	10064185

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84-74-2	21 Day(s), (21 Day(s))	*Pimephales promelas* (Fathead Minnow), Mature reproductive, ~24.4 Week(s), Both, Laboratory (SMITHERS VISCIENT, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, 23-24 Organism	Measured	<1.6-<3.0 ug/L / <1.6-<3.0 ug/L / 5.1 (4.4-7.5) ug/L / 12 (10-20) ug/L / 32 (24-56) ug/L / 62 (40-109) ug/L	Cellular (Histology-Histological changes, general, Response Site: Ovaries,Testes,Thyroid)	NR (5.1-62 ug/L)	Hepatic/Liver	High	10064185
84-74-2	21 Day(s), (21 Day(s))	*Pimephales promelas* (Fathead Minnow), Mature reproductive, ~24.4 Week(s), Both (Measured in: Male organisms), Laboratory (SMITHERS VISCIENT, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, 8 Male organisms	Measured	<1.6-<3.0 ug/L / <1.6-<3.0 ug/L / 5.1 (4.4-7.5) ug/L / 12 (10-20) ug/L / 32 (24-56) ug/L / 62 (40-109) ug/L	Growth (Development-Sexual development, Response Site: Not reported)	NOEC (62 (40-109) ug/L)	Reproductive/Teratogenic	High	10064185
84-74-2	21 Day(s), (21 Day(s))	*Pimephales promelas* (Fathead Minnow), Mature reproductive, ~24.4 Week(s), Both (Measured in: Female organisms), Laboratory (SMITHERS VISCIENT, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, 15-16 Female organisms	Measured	<1.6-<3.0 ug/L / <1.6-<3.0 ug/L / 5.1 (4.4-7.5) ug/L / 12 (10-20) ug/L / 32 (24-56) ug/L / 62 (40-109) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (62 (40-109) ug/L)	Development/Growth	High	10064185

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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
84-74-2	21 Day(s), (21 Day(s))	*Pimephales promelas* (Fathead Minnow), Mature reproductive, ~24.4 Week(s), Both (Measured in: Female organisms), Laboratory (SMITHERS VISCIENT, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, 15-16 Female organisms	Measured	<1.6-<3.0 ug/L / <1.6-<3.0 ug/L / 5.1 (4.4-7.5) ug/L / 12 (10-20) ug/L / 32 (24-56) ug/L / 62 (40-109) ug/L	Biochemical (Biochemistry-Vitellogenin, Response Site: Plasma)	NOEC (62 (40-109) ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Reproductive/Teratogenic	High	10064185
84-74-2	21 Day(s), (21 Day(s))	*Pimephales promelas* (Fathead Minnow), Mature reproductive, ~24.4 Week(s), Both (Measured in: Female organisms), Laboratory (SMITHERS VISCIENT, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, 15-16 Female organisms	Measured	<1.6-<3.0 ug/L / <1.6-<3.0 ug/L / 5.1 (4.4-7.5) ug/L / 12 (10-20) ug/L / 32 (24-56) ug/L / 62 (40-109) ug/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (62 (40-109) ug/L)	Reproductive/Teratogenic	High	10064185
84-74-2	21 Day(s), (21 Day(s))	*Pimephales promelas* (Fathead Minnow), Mature reproductive, ~24.4 Week(s), Both (Measured in: Female organisms), Laboratory (SMITHERS VISCIENT, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, 15-16 Female organisms	Measured	<1.6-<3.0 ug/L / <1.6-<3.0 ug/L / 5.1 (4.4-7.5) ug/L / 12 (10-20) ug/L / 32 (24-56) ug/L / 62 (40-109) ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Not reported)	NOEC (62 (40-109) ug/L)	Development/Growth	High	10064185

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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
84-74-2	21 Day(s), (21 Day(s))	*Pimephales promelas* (Fathead Minnow), Mature reproductive, ~24.4 Week(s), Both (Measured in: Male organisms), Laboratory (SMITHERS VISCIENT, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, 8 Male organisms	Measured	<1.6-<3.0 ug/L / <1.6-<3.0 ug/L / 5.1 (4.4-7.5) ug/L / 12 (10-20) ug/L / 32 (24-56) ug/L / 62 (40-109) ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (62 (40-109) ug/L)	Mortality	High	10064185
84-74-2	21 Day(s), (21 Day(s))	*Pimephales promelas* (Fathead Minnow), Mature reproductive, ~24.4 Week(s), Both (Measured in: Male organisms), Laboratory (SMITHERS VISCIENT, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, 7-8 Male organisms	Measured	<1.6-<3.0 ug/L / <1.6-<3.0 ug/L / 5.1 (4.4-7.5) ug/L / 12 (10-20) ug/L / 32 (24-56) ug/L / 62 (40-109) ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Not reported)	NOEC (62 (40-109) ug/L)	Development/Growth	High	10064185
84-74-2	21 Day(s), (21 Day(s))	*Pimephales promelas* (Fathead Minnow), Mature reproductive, ~24.4 Week(s), Both, Laboratory (SMITHERS VISCIENT, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, 23-24 Organism	Measured	<1.6-<3.0 ug/L / <1.6-<3.0 ug/L / 5.1 (4.4-7.5) ug/L / 12 (10-20) ug/L / 32 (24-56) ug/L / 62 (40-109) ug/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (62 (40-109) ug/L)	Mortality	High	10064185

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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
84-74-2	21 Day(s), (21 Day(s))	*Pimephales promelas* (Fathead Minnow), Mature reproductive, ~24.4 Week(s) (Measured in: Egg), Both, Laboratory (SMITHERS VISCIENT, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, NA Egg	Measured	<1.6-<3.0 ug/L / <1.6-<3.0 ug/L / 5.1 (4.4-7.5) ug/L / 12 (10-20) ug/L / 32 (24-56) ug/L / 62 (40-109) ug/L	Reproduction (Reproduction-Fertilization, Response Site: Egg)	NOEC (62 (40-109) ug/L)	Reproductive/Teratogenic	High	10064185
84-74-2	21 Day(s), (21 Day(s))	*Pimephales promelas* (Fathead Minnow), Mature reproductive, ~24.4 Week(s), Both, Laboratory (SMITHERS VISCIENT, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, 23-24 Organism	Measured	<1.6-<3.0 ug/L / <1.6-<3.0 ug/L / 5.1 (4.4-7.5) ug/L / 12 (10-20) ug/L / 32 (24-56) ug/L / 62 (40-109) ug/L	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NR (5.1-62 ug/L)	Behavioral	High	10064185
84-74-2	21 Day(s), (21 Day(s))	*Pimephales promelas* (Fathead Minnow), Mature reproductive, ~24.4 Week(s), Both, Laboratory (SMITHERS VISCIENT, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, 23-24 Organism	Measured	<1.6-<3.0 ug/L / <1.6-<3.0 ug/L / 5.1 (4.4-7.5) ug/L / 12 (10-20) ug/L / 32 (24-56) ug/L / 62 (40-109) ug/L	Biochemical (Hormone(s)-17-beta Estradiol,Testosterone, Response Site: Plasma)	NR (5.1-62 ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Reproductive/Teratogenic	High	10064185
84-74-2	21 Day(s), (21 Day(s))	*Pimephales promelas* (Fathead Minnow), Mature reproductive, ~24.4 Week(s), Both, Laboratory (SMITHERS VISCIENT, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, 23-24 Organism	Measured	<1.6-<3.0 ug/L / <1.6-<3.0 ug/L / 5.1 (4.4-7.5) ug/L / 12 (10-20) ug/L / 32 (24-56) ug/L / 62 (40-109) ug/L	Cellular (Histology-Histological changes, general, Response Site: Ovaries,Testes,Thyroid)	NR (5.1-62 ug/L)	Reproductive/Teratogenic	High	10064185

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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
84-74-2	21 Day(s), (21 Day(s))	*Pimephales promelas* (Fathead Minnow), Mature reproductive, ~24.4 Week(s), Both, Laboratory (SMITHERS VISCIENT, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, 23-24 Organism	Measured	<1.6-<3.0 ug/L / <1.6-<3.0 ug/L / 5.1 (4.4-7.5) ug/L / 12 (10-20) ug/L / 32 (24-56) ug/L / 62 (40-109) ug/L	Growth (Development-Color,Sexual development, Response Site: Not reported)	NR (5.1-62 ug/L)	Reproductive/Teratogenic	High	10064185
84-74-2	21 Day(s), (21 Day(s))	*Pimephales promelas* (Fathead Minnow), Mature reproductive, ~24.4 Week(s), Both (Measured in: Female organisms), Laboratory (SMITHERS VISCIENT, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, 15-16 Female organisms	Measured	<1.6-<3.0 ug/L / <1.6-<3.0 ug/L / 5.1 (4.4-7.5) ug/L / 12 (10-20) ug/L / 32 (24-56) ug/L / 62 (40-109) ug/L	Growth (Growth-Length, Response Site: Whole organism)	NR (5.1-62 ug/L)	Development/Growth	High	10064185
84-74-2	21 Day(s), (21 Day(s))	*Pimephales promelas* (Fathead Minnow), Mature reproductive, ~24.4 Week(s), Both (Measured in: Male organisms), Laboratory (SMITHERS VISCIENT, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, 8 Male organisms	Measured	<1.6-<3.0 ug/L / <1.6-<3.0 ug/L / 5.1 (4.4-7.5) ug/L / 12 (10-20) ug/L / 32 (24-56) ug/L / 62 (40-109) ug/L	Growth (Growth-Length, Response Site: Whole organism)	NR (5.1-62 ug/L)	Development/Growth	High	10064185

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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
84-74-2	21 Day(s), (21 Day(s))	*Pimephales promelas* (Fathead Minnow), Mature reproductive, ~24.4 Week(s), Both (Measured in: Male organisms), Laboratory (SMITHERS VISCIENT, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, 7-8 Male organisms	Measured	<1.6-<3.0 ug/L / <1.6-<3.0 ug/L / 5.1 (4.4-7.5) ug/L / 12 (10-20) ug/L / 32 (24-56) ug/L / 62 (40-109) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (62 (40-109) ug/L)	Development/Growth	High	10064185
84-74-2	21 Day(s), (21 Day(s))	*Pimephales promelas* (Fathead Minnow), Mature reproductive, ~24.4 Week(s), Both, Laboratory (SMITHERS VISCIENT, WAREHAM, MASSACHUSETTS)	Fresh water, Aqueous (aquatic habitat), Flow-through, 23-24 Organism	Measured	<1.6-<3.0 ug/L / <1.6-<3.0 ug/L / 5.1 (4.4-7.5) ug/L / 12 (10-20) ug/L / 32 (24-56) ug/L / 62 (40-109) ug/L	Behavior (Behavior-Behavioral changes, general,Movements, number of,Swimming, Response Site: Not reported)	NR (5.1-62 ug/L)	Behavioral	High	10064185
84-74-2	2 Week(s), (2 Week(s))	*Salmo salar* (Atlantic Salmon), Juvenile, Not Reported, Not reported (NR)	Fresh water, Aqueous (aquatic habitat), Flow-through, 6-8 Organism	Unmeasured	0 ug/L / 9 ug/L / 19 ug/L / 63 ug/L	Biochemical (Biochemistry-Estrogen receptor protein, Response Site: Plasma)	LOEC (19 ug/L)	Mechanistic: Cell signaling/function; Receptor binding/ regulation of receptor activity; Endocrine toxicity; Reproductive/Teratogenic	Low	1332592
84-74-2	2 Week(s), (2 Week(s))	*Salmo salar* (Atlantic Salmon), Juvenile, Not Reported, Not reported (NR)	Fresh water, Aqueous (aquatic habitat), Flow-through, 6-8 Organism	Unmeasured	0 ug/L / 9 ug/L / 19 ug/L / 63 ug/L	Biochemical (Biochemistry-Estrogen receptor protein, Response Site: Plasma)	NOEC (9 ug/L)	Mechanistic: Cell signaling/function; Receptor binding/ regulation of receptor activity; Endocrine toxicity; Reproductive/Teratogenic	Low	1332592

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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
84-74-2	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, 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 (1000 mg/kg diet)	Development/Growth	High	1335887
84-74-2	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)	LOEC (100 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887
84-74-2	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, 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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84-74-2	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
84-74-2	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
84-74-2	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)	LOEC (500 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887

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84-74-2	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 (1000 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887
84-74-2	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)	NOEC (100 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887
84-74-2	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 (100 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887

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84-74-2	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 (500 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887
84-74-2	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 (100 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887
84-74-2	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: Kidney)	NOEC (100 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887

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84-74-2	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
84-74-2	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)	LOEC (1000 mg/kg diet)	Development/Growth	High	1335887
84-74-2	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: Liver)	NOEC (100 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
84-74-2	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
84-74-2	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: Liver)	LOEC (500 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887
84-74-2	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: Kidney)	LOEC (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
84-74-2	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)	NOEC (500 mg/kg diet)	Development/Growth	High	1335887
84-74-2	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
84-74-2	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

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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
84-74-2	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 (1000 mg/kg diet)	Mechanistic: Biomarkers (exposure and effect)	High	1335887
84-74-2	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
84-74-2	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)	NOEC (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
84-74-2	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
84-74-2	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 (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: 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
84-74-2	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 (0.50 mg/L)	Mortality	High	1321996
84-74-2	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)	NOEC (0.26 mg/L)	Mortality	High	1321996
84-74-2	24 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 / 0.07 (0.04-0.09) mg/L / 0.15 (0.06-0.23) mg/L / 0.26 (0.09-0.43) mg/L / 0.57 (0.34-0.79) mg/L / 0.93 (0.55-1.30) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>1.3 mg/L)	Mortality	High	1316220
84-74-2	48 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 / 0.07 (0.04-0.09) mg/L / 0.15 (0.06-0.23) mg/L / 0.26 (0.09-0.43) mg/L / 0.57 (0.34-0.79) mg/L / 0.93 (0.55-1.30) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (0.87 (0.77-1.01) mg/L)	Mortality	High	1316220

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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
84-74-2	72 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 / 0.07 (0.04-0.09) mg/L / 0.15 (0.06-0.23) mg/L / 0.26 (0.09-0.43) mg/L / 0.57 (0.34-0.79) mg/L / 0.93 (0.55-1.30) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (0.77 (0.65-0.94) mg/L)	Mortality	High	1316220
84-74-2	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 / 0.07 (0.04-0.09) mg/L / 0.15 (0.06-0.23) mg/L / 0.26 (0.09-0.43) mg/L / 0.57 (0.34-0.79) mg/L / 0.93 (0.55-1.30) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (0.75 (0.64-0.91) mg/L)	Mortality	High	1316220
84-74-2	72 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)	LOEC (10 ppm)	Mortality	Low	1315792
84-74-2	24 Hour(s), (24 Hour(s))	*Artemia salina* (Brine Shrimp), Egg, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 M / 0.000037 M / >0.00005-<0.00010 M / >0.00015-<0.00020 M	Mortality (Mortality-Hatch, Response Site: Not reported)	LOEC (0.000037 M)	Mortality	Uninformative	5569571
84-74-2	24 Hour(s), (24 Hour(s))	*Artemia salina* (Brine Shrimp), Nauplii, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 M / 0.000037 M / 0.000075 M / 0.000188 M	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (0.000037-0.000188 M)	Mortality	Uninformative	5569571

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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
84-74-2	14 Day(s), (14 Day(s))	*Arthropoda* (Arthropod Phylum), Not reported, Not Reported, Wild (COLONIZED FROM FIELD AQUARIA IN SANTA ROSA SOUND, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.036 mg/L / 0.45 mg/L / 3.8 mg/L	Population (Population-Diversity, Evenness, Response Site: Not reported)	NOEC (3.8 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Arthropoda* (Arthropod Phylum), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Diversity, Evenness, Response Site: Not reported)	LOEC (3.7 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Arthropoda* (Arthropod Phylum), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Diversity, Evenness, Response Site: Not reported)	NOEC (0.34 mg/L)	Development/Growth	Medium	5495608

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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
84-74-2	14 Day(s), (14 Day(s))	*Arthropoda* (Arthropod Phylum), Not reported, Not Reported, Wild (COLONIZED FROM FIELD AQUARIA IN SANTA ROSA SOUND, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.036 mg/L / 0.45 mg/L / 3.8 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (3.8 mg/L)	Development/Growth	Medium	5495608
84-74-2	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	0.18 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.18 ug/L)	ADME (biotransformation)	Uninformative	1334646
84-74-2	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	0.18 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.18 ug/L)	ADME (biotransformation)	Uninformative	1334646
84-74-2	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	0.18 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.18 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
84-74-2	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 (0.76 (0.52-1.10) mg/L)	Immobilization	Uninformative	813673
84-74-2	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 (0.76 (0.52-1.10) mg/L)	Immobilization	Uninformative	813673
84-74-2	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 (5.4 (3.8-7.5) 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
84-74-2	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 (5.4 (3.8-7.5) mg/L)	Mortality	Medium	1332972
84-74-2	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 (4.0 (3.0-5.4) mg/L)	Mortality	Medium	1332972
84-74-2	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 (4.0 (3.0-5.4) mg/L)	Mortality	Medium	1332972
84-74-2	20 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 / 274 ug/L / 465 ug/L / 695 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (695 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
84-74-2	20 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 / 274 ug/L / 465 ug/L / 695 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (695 ug/L)	Mortality	Medium	1332972
84-74-2	25 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 / 274 ug/L / 465 ug/L / 695 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (695 ug/L)	Mortality	Medium	1332972
84-74-2	25 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 / 274 ug/L / 465 ug/L / 695 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (695 ug/L)	Mortality	Medium	1332972
84-74-2	30 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 / 274 ug/L / 465 ug/L / 695 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (695 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
84-74-2	30 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 / 274 ug/L / 465 ug/L / 695 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (695 ug/L)	Mortality	Medium	1332972
84-74-2	35 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 / 274 ug/L / 465 ug/L / 695 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (695 ug/L)	Mortality	Medium	1332972
84-74-2	35 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 / 274 ug/L / 465 ug/L / 695 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (695 ug/L)	Mortality	Medium	1332972
84-74-2	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 / 274 ug/L / 465 ug/L / 695 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (695 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
84-74-2	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 / 274 ug/L / 465 ug/L / 695 ug/L	Growth (Development-Emergence, Response Site: Not reported)	NOEC (695 ug/L)	Mortality	Medium	1332972
84-74-2	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	<0.952 (<0.320-1.35) mg/kg dw sediment / 50.1 (15.0-105) mg/kg dw sediment / 315 (196-463) mg/kg dw sediment / 1210 (857-1400) mg/kg dw sediment / 4460 (4010-5070) mg/kg dw sediment / 17000 (14900-19400) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (50.1 (15.0-105) mg/kg dw sediment)	Mortality	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
84-74-2	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	<0.952 (<0.320-1.35) mg/kg dw sediment / 50.1 (15.0-105) mg/kg dw sediment / 315 (196-463) mg/kg dw sediment / 1210 (857-1400) mg/kg dw sediment / 4460 (4010-5070) mg/kg dw sediment / 17000 (14900-19400) mg/kg dw sediment	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (826 mg/kg dw sediment)	Mortality	High	679311
84-74-2	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	<0.015 (<0.005-0.021) mg/L / 0.672 (0.051-1.60) mg/L / 4.59 (2.35-6.73) mg/L / 9.79 (8.91-10.7) mg/L / 14.7 (14.1-15.8) mg/L / 74.2 (34.5-117) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.672 (0.051-1.60) mg/L)	Mortality	High	679311
84-74-2	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	<0.004 (<0.002-0.009) mg/L / 0.265 (0.024-0.919) mg/L / 0.448 (0.036-1.36) mg/L / 5.85 (2.00-10.3) mg/L / 9.42 (8.07-10.4) mg/L / 11.6 (8.39-13.4) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.448 (0.036-1.36) mg/L)	Mortality	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
84-74-2	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	<0.015 (<0.005-0.021) mg/L / 0.672 (0.051-1.60) mg/L / 4.59 (2.35-6.73) mg/L / 9.79 (8.91-10.7) mg/L / 14.7 (14.1-15.8) mg/L / 74.2 (34.5-117) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (4.59 (2.35-6.73) mg/L)	Mortality	High	679311
84-74-2	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	<0.012 (<0.004-0.022) mg/L / 0.353 (0.024-1.20) mg/L / 3.85 (0.804-5.65) mg/L / 16.0 (13.2-21.0) mg/L / 52.1 (16.4-90.8) mg/L / 58.9 (22.1-112) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NR (0.024-112 mg/L)	Development/Growth	High	679311
84-74-2	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	<0.012 (<0.004-0.022) mg/L / 0.353 (0.024-1.20) mg/L / 3.85 (0.804-5.65) mg/L / 16.0 (13.2-21.0) mg/L / 52.1 (16.4-90.8) mg/L / 58.9 (22.1-112) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (3.85 (0.804-5.65) mg/L)	Mortality	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
84-74-2	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	<0.012 (<0.004-0.022) mg/L / 0.353 (0.024-1.20) mg/L / 3.85 (0.804-5.65) mg/L / 16.0 (13.2-21.0) mg/L / 52.1 (16.4-90.8) mg/L / 58.9 (22.1-112) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (16.0 (13.2-21.0) mg/L)	Mortality	High	679311
84-74-2	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	<0.004 (<0.002-0.009) mg/L / 0.265 (0.024-0.919) mg/L / 0.448 (0.036-1.36) mg/L / 5.85 (2.00-10.3) mg/L / 9.42 (8.07-10.4) mg/L / 11.6 (8.39-13.4) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (0.448 (0.036-1.36) mg/L)	Development/Growth	High	679311
84-74-2	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	<0.004 (<0.002-0.009) mg/L / 0.265 (0.024-0.919) mg/L / 0.448 (0.036-1.36) mg/L / 5.85 (2.00-10.3) mg/L / 9.42 (8.07-10.4) mg/L / 11.6 (8.39-13.4) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (5.85 (2.00-10.3) mg/L)	Mortality	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
84-74-2	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	<0.004 (<0.002-0.009) mg/L / 0.265 (0.024-0.919) mg/L / 0.448 (0.036-1.36) mg/L / 5.85 (2.00-10.3) mg/L / 9.42 (8.07-10.4) mg/L / 11.6 (8.39-13.4) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (5.85 (2.00-10.3) mg/L)	Development/Growth	High	679311
84-74-2	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	<0.004 (<0.002-0.009) mg/L / 0.265 (0.024-0.919) mg/L / 0.448 (0.036-1.36) mg/L / 5.85 (2.00-10.3) mg/L / 9.42 (8.07-10.4) mg/L / 11.6 (8.39-13.4) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.448 (0.036-1.36) mg/L)	Mortality	High	679311
84-74-2	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	2.63 (0.531-4.48) mg/kg dw sediment / 76.6 (19.4-123) mg/kg dw sediment / 423 (192-564) mg/kg dw sediment / 3090 (2470-3840) mg/kg dw sediment / 8280 (6450-10400) mg/kg dw sediment / 24300 (20500-33000) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	NR (76.6-24300 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
84-74-2	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	<8.07 (<0.816-28.9) mg/kg dw sediment / 146 (15.0-414) mg/kg dw sediment / 508 (181-1016) mg/kg dw sediment / 3550 (1360-5420) mg/kg dw sediment / 20200 (14700-28900) mg/kg dw sediment / 79500 (42700-105000) mg/kg dw sediment	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (4730 mg/kg dw sediment)	Mortality	High	679311
84-74-2	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	2.63 (0.531-4.48) mg/kg dw sediment / 76.6 (19.4-123) mg/kg dw sediment / 423 (192-564) mg/kg dw sediment / 3090 (2470-3840) mg/kg dw sediment / 8280 (6450-10400) mg/kg dw sediment / 24300 (20500-33000) mg/kg dw sediment	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (1664 mg/kg dw sediment)	Mortality	High	679311
84-74-2	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	NR / NR / NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (10.3 mg/L)	Mortality	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
84-74-2	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	NR / NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (4.22 (3.06-5.83) mg/L)	Mortality	High	679311
84-74-2	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	NR / NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (6.95 (4.91-9.83) mg/L)	Mortality	High	679311
84-74-2	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	<8.07 (<0.816-28.9) mg/kg dw sediment / 146 (15.0-414) mg/kg dw sediment / 508 (181-1016) mg/kg dw sediment / 3550 (1360-5420) mg/kg dw sediment / 20200 (14700-28900) mg/kg dw sediment / 79500 (42700-105000) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (508 (181-1016) mg/kg dw sediment)	Mortality	High	679311
84-74-2	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	<0.004 (<0.002-0.009) mg/L / 0.265 (0.024-0.919) mg/L / 0.448 (0.036-1.36) mg/L / 5.85 (2.00-10.3) mg/L / 9.42 (8.07-10.4) mg/L / 11.6 (8.39-13.4) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (5.85 (2.00-10.3) mg/L)	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
84-74-2	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	2.63 (0.531-4.48) mg/kg dw sediment / 76.6 (19.4-123) mg/kg dw sediment / 423 (192-564) mg/kg dw sediment / 3090 (2470-3840) mg/kg dw sediment / 8280 (6450-10400) mg/kg dw sediment / 24300 (20500-33000) mg/kg dw sediment	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (1664 mg/kg dw sediment)	Mortality	High	679311
84-74-2	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	2.63 (0.531-4.48) mg/kg dw sediment / 76.6 (19.4-123) mg/kg dw sediment / 423 (192-564) mg/kg dw sediment / 3090 (2470-3840) mg/kg dw sediment / 8280 (6450-10400) mg/kg dw sediment / 24300 (20500-33000) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (3090 (2470-3840) mg/kg dw sediment)	Mortality	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
84-74-2	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	2.63 (0.531-4.48) mg/kg dw sediment / 76.6 (19.4-123) mg/kg dw sediment / 423 (192-564) mg/kg dw sediment / 3090 (2470-3840) mg/kg dw sediment / 8280 (6450-10400) mg/kg dw sediment / 24300 (20500-33000) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (423 (192-564) mg/kg dw sediment)	Mortality	High	679311
84-74-2	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	2.63 (0.531-4.48) mg/kg dw sediment / 76.6 (19.4-123) mg/kg dw sediment / 423 (192-564) mg/kg dw sediment / 3090 (2470-3840) mg/kg dw sediment / 8280 (6450-10400) mg/kg dw sediment / 24300 (20500-33000) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	NR (76.6-24300 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
84-74-2	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	<8.07 (<0.816-28.9) mg/kg dw sediment / 146 (15.0-414) mg/kg dw sediment / 508 (181-1016) mg/kg dw sediment / 3550 (1360-5420) mg/kg dw sediment / 20200 (14700-28900) mg/kg dw sediment / 79500 (42700-105000) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (3550 (1360-5420) mg/kg dw sediment)	Development/Growth	High	679311
84-74-2	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	<0.004 (<0.002-0.009) mg/L / 0.265 (0.024-0.919) mg/L / 0.448 (0.036-1.36) mg/L / 5.85 (2.00-10.3) mg/L / 9.42 (8.07-10.4) mg/L / 11.6 (8.39-13.4) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (5.85 (2.00-10.3) mg/L)	Mortality	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
84-74-2	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	<0.004 (<0.002-0.009) mg/L / 0.265 (0.024-0.919) mg/L / 0.448 (0.036-1.36) mg/L / 5.85 (2.00-10.3) mg/L / 9.42 (8.07-10.4) mg/L / 11.6 (8.39-13.4) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (0.448 (0.036-1.36) mg/L)	Development/Growth	High	679311
84-74-2	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	<0.015 (<0.005-0.021) mg/L / 0.672 (0.051-1.60) mg/L / 4.59 (2.35-6.73) mg/L / 9.79 (8.91-10.7) mg/L / 14.7 (14.1-15.8) mg/L / 74.2 (34.5-117) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (74.2 (34.5-117) mg/L)	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
84-74-2	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	<8.07 (<0.816-28.9) mg/kg dw sediment / 146 (15.0-414) mg/kg dw sediment / 508 (181-1016) mg/kg dw sediment / 3550 (1360-5420) mg/kg dw sediment / 20200 (14700-28900) mg/kg dw sediment / 79500 (42700-105000) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (508 (181-1016) mg/kg dw sediment)	Development/Growth	High	679311
84-74-2	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	2.63 (0.531-4.48) mg/kg dw sediment / 76.6 (19.4-123) mg/kg dw sediment / 423 (192-564) mg/kg dw sediment / 3090 (2470-3840) mg/kg dw sediment / 8280 (6450-10400) mg/kg dw sediment / 24300 (20500-33000) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (423 (192-564) mg/kg dw sediment)	Mortality	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
84-74-2	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	<8.07 (<0.816-28.9) mg/kg dw sediment / 146 (15.0-414) mg/kg dw sediment / 508 (181-1016) mg/kg dw sediment / 3550 (1360-5420) mg/kg dw sediment / 20200 (14700-28900) mg/kg dw sediment / 79500 (42700-105000) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (3550 (1360-5420) mg/kg dw sediment)	Mortality	High	679311
84-74-2	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	NR / NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (6.95 (4.91-9.83) mg/L)	Mortality	High	679311
84-74-2	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	<8.07 (<0.816-28.9) mg/kg dw sediment / 146 (15.0-414) mg/kg dw sediment / 508 (181-1016) mg/kg dw sediment / 3550 (1360-5420) mg/kg dw sediment / 20200 (14700-28900) mg/kg dw sediment / 79500 (42700-105000) mg/kg dw sediment	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (4730 mg/kg dw sediment)	Mortality	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
84-74-2	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	<0.952 (<0.320-1.35) mg/kg dw sediment / 50.1 (15.0-105) mg/kg dw sediment / 315 (196-463) mg/kg dw sediment / 1210 (857-1400) mg/kg dw sediment / 4460 (4010-5070) mg/kg dw sediment / 17000 (14900-19400) mg/kg dw sediment	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (826 mg/kg dw sediment)	Mortality	High	679311
84-74-2	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	<0.015 (<0.005-0.021) mg/L / 0.672 (0.051-1.60) mg/L / 4.59 (2.35-6.73) mg/L / 9.79 (8.91-10.7) mg/L / 14.7 (14.1-15.8) mg/L / 74.2 (34.5-117) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.672 (0.051-1.60) mg/L)	Mortality	High	679311
84-74-2	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	<0.015 (<0.005-0.021) mg/L / 0.672 (0.051-1.60) mg/L / 4.59 (2.35-6.73) mg/L / 9.79 (8.91-10.7) mg/L / 14.7 (14.1-15.8) mg/L / 74.2 (34.5-117) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (4.59 (2.35-6.73) mg/L)	Mortality	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
84-74-2	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	<0.012 (<0.004-0.022) mg/L / 0.353 (0.024-1.20) mg/L / 3.85 (0.804-5.65) mg/L / 16.0 (13.2-21.0) mg/L / 52.1 (16.4-90.8) mg/L / 58.9 (22.1-112) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NR (0.024-112 mg/L)	Development/Growth	High	679311
84-74-2	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	<0.012 (<0.004-0.022) mg/L / 0.353 (0.024-1.20) mg/L / 3.85 (0.804-5.65) mg/L / 16.0 (13.2-21.0) mg/L / 52.1 (16.4-90.8) mg/L / 58.9 (22.1-112) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (3.85 (0.804-5.65) mg/L)	Mortality	High	679311
84-74-2	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	<0.015 (<0.005-0.021) mg/L / 0.672 (0.051-1.60) mg/L / 4.59 (2.35-6.73) mg/L / 9.79 (8.91-10.7) mg/L / 14.7 (14.1-15.8) mg/L / 74.2 (34.5-117) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (74.2 (34.5-117) mg/L)	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
84-74-2	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	<0.952 (<0.320-1.35) mg/kg dw sediment / 50.1 (15.0-105) mg/kg dw sediment / 315 (196-463) mg/kg dw sediment / 1210 (857-1400) mg/kg dw sediment / 4460 (4010-5070) mg/kg dw sediment / 17000 (14900-19400) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (315 (196-463) mg/kg dw sediment)	Mortality	High	679311
84-74-2	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	<0.952 (<0.320-1.35) mg/kg dw sediment / 50.1 (15.0-105) mg/kg dw sediment / 315 (196-463) mg/kg dw sediment / 1210 (857-1400) mg/kg dw sediment / 4460 (4010-5070) mg/kg dw sediment / 17000 (14900-19400) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (17000 (14900-19400) 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
84-74-2	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	2.63 (0.531-4.48) mg/kg dw sediment / 76.6 (19.4-123) mg/kg dw sediment / 423 (192-564) mg/kg dw sediment / 3090 (2470-3840) mg/kg dw sediment / 8280 (6450-10400) mg/kg dw sediment / 24300 (20500-33000) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (3090 (2470-3840) mg/kg dw sediment)	Mortality	High	679311
84-74-2	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	<0.012 (<0.004-0.022) mg/L / 0.353 (0.024-1.20) mg/L / 3.85 (0.804-5.65) mg/L / 16.0 (13.2-21.0) mg/L / 52.1 (16.4-90.8) mg/L / 58.9 (22.1-112) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (16.0 (13.2-21.0) mg/L)	Mortality	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
84-74-2	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	<0.952 (<0.320-1.35) mg/kg dw sediment / 50.1 (15.0-105) mg/kg dw sediment / 315 (196-463) mg/kg dw sediment / 1210 (857-1400) mg/kg dw sediment / 4460 (4010-5070) mg/kg dw sediment / 17000 (14900-19400) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (17000 (14900-19400) mg/kg dw sediment)	Development/Growth	High	679311
84-74-2	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	<0.952 (<0.320-1.35) mg/kg dw sediment / 50.1 (15.0-105) mg/kg dw sediment / 315 (196-463) mg/kg dw sediment / 1210 (857-1400) mg/kg dw sediment / 4460 (4010-5070) mg/kg dw sediment / 17000 (14900-19400) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (50.1 (15.0-105) mg/kg dw sediment)	Mortality	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
84-74-2	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	<0.952 (<0.320-1.35) mg/kg dw sediment / 50.1 (15.0-105) mg/kg dw sediment / 315 (196-463) mg/kg dw sediment / 1210 (857-1400) mg/kg dw sediment / 4460 (4010-5070) mg/kg dw sediment / 17000 (14900-19400) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (315 (196-463) mg/kg dw sediment)	Mortality	High	679311
84-74-2	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	<8.07 (<0.816-28.9) mg/kg dw sediment / 146 (15.0-414) mg/kg dw sediment / 508 (181-1016) mg/kg dw sediment / 3550 (1360-5420) mg/kg dw sediment / 20200 (14700-28900) mg/kg dw sediment / 79500 (42700-105000) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (508 (181-1016) mg/kg dw sediment)	Mortality	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
84-74-2	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	<8.07 (<0.816-28.9) mg/kg dw sediment / 146 (15.0-414) mg/kg dw sediment / 508 (181-1016) mg/kg dw sediment / 3550 (1360-5420) mg/kg dw sediment / 20200 (14700-28900) mg/kg dw sediment / 79500 (42700-105000) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (508 (181-1016) mg/kg dw sediment)	Development/Growth	High	679311
84-74-2	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	NR / NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (10.3 mg/L)	Mortality	High	679311
84-74-2	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	NR / NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (4.22 (3.06-5.83) mg/L)	Mortality	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
84-74-2	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	<8.07 (<0.816-28.9) mg/kg dw sediment / 146 (15.0-414) mg/kg dw sediment / 508 (181-1016) mg/kg dw sediment / 3550 (1360-5420) mg/kg dw sediment / 20200 (14700-28900) mg/kg dw sediment / 79500 (42700-105000) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (3550 (1360-5420) mg/kg dw sediment)	Development/Growth	High	679311
84-74-2	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	<8.07 (<0.816-28.9) mg/kg dw sediment / 146 (15.0-414) mg/kg dw sediment / 508 (181-1016) mg/kg dw sediment / 3550 (1360-5420) mg/kg dw sediment / 20200 (14700-28900) mg/kg dw sediment / 79500 (42700-105000) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (3550 (1360-5420) mg/kg dw sediment)	Mortality	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
84-74-2	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	<0.05 mg/L / 0.17 mg/L / 0.40 mg/L / 0.99 mg/L / 1.78 mg/L / 4.52 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (0.99 mg/L)	Mortality	High	679312
84-74-2	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	<0.05 mg/L / 0.17 mg/L / 0.40 mg/L / 0.99 mg/L / 1.78 mg/L / 4.52 mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (1.78 mg/L)	Development/Growth	High	679312
84-74-2	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	<0.05 mg/L / 0.17 mg/L / 0.40 mg/L / 0.99 mg/L / 1.78 mg/L / 4.52 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-LETH (4.52 mg/L)	Mortality	High	679312

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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
84-74-2	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	<0.05 mg/L / 0.17 mg/L / 0.40 mg/L / 0.99 mg/L / 1.78 mg/L / 4.52 mg/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (4.52 mg/L)	Development/Growth	High	679312
84-74-2	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	<0.05 mg/L / 0.17 mg/L / 0.40 mg/L / 0.99 mg/L / 1.78 mg/L / 4.52 mg/L	Growth (Growth-Weight, Response Site: Whole organism)	EC50 (2.81 mg/L)	Development/Growth	High	679312
84-74-2	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	<0.05 mg/L / 0.17 mg/L / 0.40 mg/L / 0.99 mg/L / 1.78 mg/L / 4.52 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (2.64 (2.39-2.91) mg/L)	Mortality	High	679312

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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
84-74-2	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), Larva, 11 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	0.952 (<0.320-1.35) mg/kg dw sediment / 50.1 (15.0-105) mg/kg dw sediment / 315 (196-463) mg/kg dw sediment / 1208 (857-1398) mg/kg dw sediment / 4455 (4014-5073) mg/kg dw sediment / 18970 (14853-19359) mg/kg dw sediment	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (706 (315-1029) mg/kg dw sediment)	Mortality	High	7325945
84-74-2	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), Larva, 11 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	0.952 (<0.320-1.35) mg/kg dw sediment / 50.1 (15.0-105) mg/kg dw sediment / 315 (196-463) mg/kg dw sediment / 1208 (857-1398) mg/kg dw sediment / 4455 (4014-5073) mg/kg dw sediment / 18970 (14853-19359) mg/kg dw sediment	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (820 (0-22027) mg/kg dw sediment)	Mortality	High	7325945

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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
84-74-2	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), Larva, 11 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	0.952 (<0.320-1.35) mg/kg dw sediment / 50.1 (15.0-105) mg/kg dw sediment / 315 (196-463) mg/kg dw sediment / 1208 (857-1398) mg/kg dw sediment / 4455 (4014-5073) mg/kg dw sediment / 18970 (14853-19359) mg/kg dw sediment	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (827 (517-1320) mg/kg dw sediment)	Mortality	High	7325945
84-74-2	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), Larva, 11 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	0.952 (<0.320-1.35) mg/kg dw sediment / 50.1 (15.0-105) mg/kg dw sediment / 315 (196-463) mg/kg dw sediment / 1208 (857-1398) mg/kg dw sediment / 4455 (4014-5073) mg/kg dw sediment / 18970 (14853-19359) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	MATC (1580 mg/kg dw sediment)	Mortality	High	7325945

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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
84-74-2	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), Larva, 11 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Leaching , Not Reported	Measured	0.012 (<0.004-0.025) mg/L / 0.351 (0.024-2.93) mg/L / 3.85 (0.804-8.02) mg/L / 16.0 (12.1-21.0) mg/L / 52.1 (13.8-90.3) mg/L / 58.9 (18.4-112) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (12.2 (11.5-14.3) mg/L)	Mortality	High	7325945
84-74-2	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), Larva, 10-11 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Leaching , Not Reported	Measured	0.004 (<0.002-0.009) mg/L / 0.265 (0.024-0.919) mg/L / 0.448 (0.036-4.67) mg/L / 5.85 (2.00-12.3) mg/L / 9.42 (8.07-12.83) mg/L / 11.6 (8.39-13.4) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	MATC (1.62 mg/L)	Mortality	High	7325945
84-74-2	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), Larva, 10-11 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Leaching , Not Reported	Measured	0.004 (<0.002-0.009) mg/L / 0.265 (0.024-0.919) mg/L / 0.448 (0.036-4.67) mg/L / 5.85 (2.00-12.3) mg/L / 9.42 (8.07-12.83) mg/L / 11.6 (8.39-13.4) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (6.21 (5.02-7.45) mg/L)	Mortality	High	7325945

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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
84-74-2	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), Larva, 10-11 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Leaching , Not Reported	Measured	0.004 (<0.002-0.009) mg/L / 0.265 (0.024-0.919) mg/L / 0.448 (0.036-4.67) mg/L / 5.85 (2.00-12.3) mg/L / 9.42 (8.07-12.83) mg/L / 11.6 (8.39-13.4) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (6.12 (4.35-7.16) mg/L)	Mortality	High	7325945
84-74-2	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), Larva, 11 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Leaching , Not Reported	Measured	0.015 (<0.005-0.021) mg/L / 0.672 (0.322-2.69) mg/L / 4.59 (2.35-8.31) mg/L / 9.79 (8.91-13.2) mg/L / 14.7 (14.0-21.6) mg/L / 74.2 (34.5-117) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	MATC (1.76 mg/L)	Mortality	High	7325945
84-74-2	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), Larva, 11 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	2.63 (<0.531-4.48) mg/kg dw sediment / 76.3 (19.4-123) mg/kg dw sediment / 423 (192-584) mg/kg dw sediment / 3033 (2470-3839) mg/kg dw sediment / 8284 (6451-10416) mg/kg dw sediment / 24347 (20526-33021) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	MATC (1140 mg/kg dw sediment)	Mortality	High	7325945

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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
84-74-2	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), Larva, 10-11 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	8.07 (<0.816-28.9) mg/kg dw sediment / 148 (15.0-414) mg/kg dw sediment / 508 (191-1016) mg/kg dw sediment / 3547 (1957-5420) mg/kg dw sediment / 20204 (14652-28888) mg/kg dw sediment / 79453 (42737-105292) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	LC50 (5213 (3060-9954) mg/kg dw sediment)	Mortality	High	7325945
84-74-2	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), Larva, 10-11 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	8.07 (<0.816-28.9) mg/kg dw sediment / 148 (15.0-414) mg/kg dw sediment / 508 (191-1016) mg/kg dw sediment / 3547 (1957-5420) mg/kg dw sediment / 20204 (14652-28888) mg/kg dw sediment / 79453 (42737-105292) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	MATC (1340 mg/kg dw sediment)	Mortality	High	7325945

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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
84-74-2	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), Larva, 11 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.05 mg/L / 0.17 (<0.05-0.33) mg/L / 0.40 (0.16-0.75) mg/L / 0.99 (0.43-1.37) mg/L / 1.78 (0.95-2.61) mg/L / 4.52 (3.56-5.67) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (3.08 (3.00-3.15) mg/L)	Mortality	High	7325945
84-74-2	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), Larva, 11 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Leaching , Not Reported	Measured	0.015 (<0.005-0.021) mg/L / 0.672 (0.322-2.69) mg/L / 4.59 (2.35-8.31) mg/L / 9.79 (8.91-13.2) mg/L / 14.7 (14.0-21.6) mg/L / 74.2 (34.5-117) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (6.88 (4.18-9.98) mg/L)	Mortality	High	7325945
84-74-2	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), Larva, 11 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Leaching , Not Reported	Measured	0.015 (<0.005-0.021) mg/L / 0.672 (0.322-2.69) mg/L / 4.59 (2.35-8.31) mg/L / 9.79 (8.91-13.2) mg/L / 14.7 (14.0-21.6) mg/L / 74.2 (34.5-117) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (6.86 (4.59-8.27) mg/L)	Mortality	High	7325945

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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
84-74-2	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), Larva, 11 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Leaching , Not Reported	Measured	0.012 (<0.004-0.025) mg/L / 0.351 (0.024-2.93) mg/L / 3.85 (0.804-8.02) mg/L / 16.0 (12.1-21.0) mg/L / 52.1 (13.8-90.3) mg/L / 58.9 (18.4-112) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	MATC (7.85 mg/L)	Mortality	High	7325945
84-74-2	10 Day(s), (10 Day(s))	*Chironomus tentans* (Midge), Larva, 11 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	2.63 (<0.531-4.48) mg/kg dw sediment / 76.3 (19.4-123) mg/kg dw sediment / 423 (192-584) mg/kg dw sediment / 3033 (2470-3839) mg/kg dw sediment / 8284 (6451-10416) mg/kg dw sediment / 24347 (20526-33021) mg/kg dw sediment	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (2261 (2092-2917) mg/kg dw sediment)	Mortality	High	7325945

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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
84-74-2	14 Day(s), (14 Day(s))	*Corophium acherusicum* (Scud), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (0.044 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Corophium acherusicum* (Scud), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (0.34 mg/L)	Development/Growth	Medium	5495608
84-74-2	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 (2.99 mg/L)	Immobilization	High	1321996
84-74-2	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)	NOEC (1.70 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
84-74-2	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	<0.0030 (<0.0023-0.028) mg/L / 0.073 (0.0040-0.22) mg/L / 0.21 (0.0072-0.63) mg/L / 0.39 (<0.0023-1.0) mg/L / 0.96 (0.050-2.4) mg/L / 2.5 (0.012-6.0) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (2.5 (0.012-6.0) mg/L)	Mortality	Medium	1316195
84-74-2	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	<0.0030 (<0.0023-0.028) mg/L / 0.073 (0.0040-0.22) mg/L / 0.21 (0.0072-0.63) mg/L / 0.39 (<0.0023-1.0) mg/L / 0.96 (0.050-2.4) mg/L / 2.5 (0.012-6.0) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.96 (0.050-2.4) mg/L)	Mortality	Medium	1316195
84-74-2	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	<0.0030 (<0.0023-0.028) mg/L / 0.073 (0.0040-0.22) mg/L / 0.21 (0.0072-0.63) mg/L / 0.39 (<0.0023-1.0) mg/L / 0.96 (0.050-2.4) mg/L / 2.5 (0.012-6.0) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (0.96 (0.050-2.4) mg/L)	Mortality	Medium	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
84-74-2	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	<0.0030 (<0.0023-0.028) mg/L / 0.073 (0.0040-0.22) mg/L / 0.21 (0.0072-0.63) mg/L / 0.39 (<0.0023-1.0) mg/L / 0.96 (0.050-2.4) mg/L / 2.5 (0.012-6.0) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (2.5 (0.012-6.0) mg/L)	Mortality	Medium	1316195
84-74-2	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	<0.0030 (<0.0023-0.028) mg/L / 0.073 (0.0040-0.22) mg/L / 0.21 (0.0072-0.63) mg/L / 0.39 (<0.0023-1.0) mg/L / 0.96 (0.050-2.4) mg/L / 2.5 (0.012-6.0) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEC (2.5 (0.012-6.0) mg/L)	Reproductive/Teratogenic	Medium	1316195
84-74-2	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	<0.0030 (<0.0023-0.028) mg/L / 0.073 (0.0040-0.22) mg/L / 0.21 (0.0072-0.63) mg/L / 0.39 (<0.0023-1.0) mg/L / 0.96 (0.050-2.4) mg/L / 2.5 (0.012-6.0) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (0.96 (0.050-2.4) mg/L)	Reproductive/Teratogenic	Medium	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
84-74-2	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	<0.0030 (<0.0023-0.028) mg/L / 0.073 (0.0040-0.22) mg/L / 0.21 (0.0072-0.63) mg/L / 0.39 (<0.0023-1.0) mg/L / 0.96 (0.050-2.4) mg/L / 2.5 (0.012-6.0) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEC (2.5 (0.012-6.0) mg/L)	Reproductive/Teratogenic	Medium	1316195
84-74-2	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	<0.0030 (<0.0023-0.028) mg/L / 0.073 (0.0040-0.22) mg/L / 0.21 (0.0072-0.63) mg/L / 0.39 (<0.0023-1.0) mg/L / 0.96 (0.050-2.4) mg/L / 2.5 (0.012-6.0) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (0.96 (0.050-2.4) mg/L)	Mortality	Medium	1316195
84-74-2	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	<0.0030 (<0.0023-0.028) mg/L / 0.073 (0.0040-0.22) mg/L / 0.21 (0.0072-0.63) mg/L / 0.39 (<0.0023-1.0) mg/L / 0.96 (0.050-2.4) mg/L / 2.5 (0.012-6.0) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEC (2.5 (0.012-6.0) mg/L)	Reproductive/Teratogenic	Medium	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
84-74-2	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	<0.0030 (<0.0023-0.028) mg/L / 0.073 (0.0040-0.22) mg/L / 0.21 (0.0072-0.63) mg/L / 0.39 (<0.0023-1.0) mg/L / 0.96 (0.050-2.4) mg/L / 2.5 (0.012-6.0) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (0.96 (0.050-2.4) mg/L)	Reproductive/Teratogenic	Medium	1316195
84-74-2	13 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	<0.0030 (<0.0023-0.028) mg/L / 0.073 (0.0040-0.22) mg/L / 0.21 (0.0072-0.63) mg/L / 0.39 (<0.0023-1.0) mg/L / 0.96 (0.050-2.4) mg/L / 2.5 (0.012-6.0) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEC (2.5 (0.012-6.0) mg/L)	Reproductive/Teratogenic	Medium	1316195
84-74-2	13 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	<0.0030 (<0.0023-0.028) mg/L / 0.073 (0.0040-0.22) mg/L / 0.21 (0.0072-0.63) mg/L / 0.39 (<0.0023-1.0) mg/L / 0.96 (0.050-2.4) mg/L / 2.5 (0.012-6.0) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (0.96 (0.050-2.4) mg/L)	Reproductive/Teratogenic	Medium	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
84-74-2	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	<0.0030 (<0.0023-0.028) mg/L / 0.073 (0.0040-0.22) mg/L / 0.21 (0.0072-0.63) mg/L / 0.39 (<0.0023-1.0) mg/L / 0.96 (0.050-2.4) mg/L / 2.5 (0.012-6.0) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.96 (0.050-2.4) mg/L)	Mortality	Medium	1316195
84-74-2	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	<0.0030 (<0.0023-0.028) mg/L / 0.073 (0.0040-0.22) mg/L / 0.21 (0.0072-0.63) mg/L / 0.39 (<0.0023-1.0) mg/L / 0.96 (0.050-2.4) mg/L / 2.5 (0.012-6.0) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (0.96 (0.050-2.4) mg/L)	Reproductive/Teratogenic	Medium	1316195
84-74-2	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	<0.0030 (<0.0023-0.028) mg/L / 0.073 (0.0040-0.22) mg/L / 0.21 (0.0072-0.63) mg/L / 0.39 (<0.0023-1.0) mg/L / 0.96 (0.050-2.4) mg/L / 2.5 (0.012-6.0) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEC (2.5 (0.012-6.0) mg/L)	Reproductive/Teratogenic	Medium	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
84-74-2	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	<0.0030 (<0.0023-0.028) mg/L / 0.073 (0.0040-0.22) mg/L / 0.21 (0.0072-0.63) mg/L / 0.39 (<0.0023-1.0) mg/L / 0.96 (0.050-2.4) mg/L / 2.5 (0.012-6.0) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (2.5 (0.012-6.0) mg/L)	Mortality	Medium	1316195
84-74-2	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	<0.0030 (<0.0023-0.028) mg/L / 0.073 (0.0040-0.22) mg/L / 0.21 (0.0072-0.63) mg/L / 0.39 (<0.0023-1.0) mg/L / 0.96 (0.050-2.4) mg/L / 2.5 (0.012-6.0) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (0.96 (0.050-2.4) mg/L)	Reproductive/Teratogenic	Medium	1316195
84-74-2	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	<0.0030 (<0.0023-0.028) mg/L / 0.073 (0.0040-0.22) mg/L / 0.21 (0.0072-0.63) mg/L / 0.39 (<0.0023-1.0) mg/L / 0.96 (0.050-2.4) mg/L / 2.5 (0.012-6.0) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEC (2.5 (0.012-6.0) mg/L)	Reproductive/Teratogenic	Medium	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
84-74-2	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	<0.0030 (<0.0023-0.028) mg/L / 0.073 (0.0040-0.22) mg/L / 0.21 (0.0072-0.63) mg/L / 0.39 (<0.0023-1.0) mg/L / 0.96 (0.050-2.4) mg/L / 2.5 (0.012-6.0) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (0.96 (0.050-2.4) mg/L)	Reproductive/Teratogenic	Medium	1316195
84-74-2	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	<0.0030 (<0.0023-0.028) mg/L / 0.073 (0.0040-0.22) mg/L / 0.21 (0.0072-0.63) mg/L / 0.39 (<0.0023-1.0) mg/L / 0.96 (0.050-2.4) mg/L / 2.5 (0.012-6.0) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEC (2.5 (0.012-6.0) mg/L)	Reproductive/Teratogenic	Medium	1316195
84-74-2	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	<0.0030 (<0.0023-0.028) mg/L / 0.073 (0.0040-0.22) mg/L / 0.21 (0.0072-0.63) mg/L / 0.39 (<0.0023-1.0) mg/L / 0.96 (0.050-2.4) mg/L / 2.5 (0.012-6.0) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEC (2.5 (0.012-6.0) mg/L)	Reproductive/Teratogenic	Medium	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
84-74-2	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	<0.0030 (<0.0023-0.028) mg/L / 0.073 (0.0040-0.22) mg/L / 0.21 (0.0072-0.63) mg/L / 0.39 (<0.0023-1.0) mg/L / 0.96 (0.050-2.4) mg/L / 2.5 (0.012-6.0) mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (0.96 (0.050-2.4) mg/L)	Reproductive/Teratogenic	Medium	1316195
84-74-2	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	<0.0050-0.15 mg/L / 0.50-0.84 mg/L / 0.75-1.2 mg/L / 1.5-1.9 mg/L / 2.0-3.2 mg/L / 3.5-4.8 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (4.2 (3.9-4.5) mg/L)	Mortality	Uninformative	1316223
84-74-2	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	<0.0043-<0.0047 mg/L / <0.0043-1.5 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>1.4 mg/L)	Mortality	Uninformative	1316223
84-74-2	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	<0.0050-0.15 mg/L / 0.50-0.84 mg/L / 0.75-1.2 mg/L / 1.5-1.9 mg/L / 2.0-3.2 mg/L / 3.5-4.8 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-LETH (3.5-4.7 mg/L)	Mortality	Uninformative	1316223
84-74-2	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	<0.0043-<0.0047 mg/L / <0.0043-1.5 mg/L	Multiple (Multiple-Multiple effects reported as one result, Response Site: Not reported)	NOEC (1.4 mg/L)	Mortality	Uninformative	1316223

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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
84-74-2	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	<0.0050-0.15 mg/L / 0.50-0.84 mg/L / 0.75-1.2 mg/L / 1.5-1.9 mg/L / 2.0-3.2 mg/L / 3.5-4.8 mg/L	Multiple (Multiple-Multiple effects reported as one result, Response Site: Not reported)	NOEC (1.9 mg/L)	Mortality	Uninformative	1316223
84-74-2	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	<0.0050-0.15 mg/L / 0.50-0.84 mg/L / 0.75-1.2 mg/L / 1.5-1.9 mg/L / 2.0-3.2 mg/L / 3.5-4.8 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (1.9 mg/L)	Mortality	Uninformative	1316223
84-74-2	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	<0.0043-<0.0047 mg/L / <0.0043-1.5 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>1.4 mg/L)	Mortality	Uninformative	1316223
84-74-2	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	<0.0050-0.15 mg/L / 0.50-0.84 mg/L / 0.75-1.2 mg/L / 1.5-1.9 mg/L / 2.0-3.2 mg/L / 3.5-4.8 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (3.4 (3.1-3.8) mg/L)	Mortality	Uninformative	1316223
84-74-2	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	<0.0043-<0.0047 mg/L / <0.0043-1.5 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (<0.0043-1.4 mg/L)	Mortality	Uninformative	1316223
84-74-2	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	<0.0043-<0.0047 mg/L / <0.0043-1.5 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (1.4 mg/L)	Mortality	Uninformative	1316223

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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
84-74-2	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Not reported, Not Reported, Laboratory (ENVIRONMENTAL RESEARCH LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (1.92 (1.58-2.33) mg/L)	Mortality	High	5774391
84-74-2	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Not reported, Not Reported, Laboratory (ENVIRONMENTAL RESEARCH LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	NR / NR	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (1.05 mg/L)	Reproductive/Teratogenic	High	5774391
84-74-2	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Not reported, Not Reported, Laboratory (ENVIRONMENTAL RESEARCH LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	NR / NR	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEC (1.91 mg/L)	Reproductive/Teratogenic	High	5774391
84-74-2	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Not reported, Not Reported, Laboratory (ENVIRONMENTAL RESEARCH LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	NR / NR	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	EC50 (1.64 mg/L)	Reproductive/Teratogenic	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
84-74-2	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 / 0.58 mg/L / 1.81 mg/L / 3.67 mg/L / 6.07 mg/L / 12.86 mg/L / 17.47 mg/L / 23.57 mg/L	Physiology (Intoxication-Immobile, Response Site: Not reported)	EC50 (8.0 mg/L)	Immobilization	High	5750702
84-74-2	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 (10.0 (9.44-10.9) mg/L)	Immobilization	Uninformative	789536
84-74-2	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 (7.56 (6.54-8.18) mg/L)	Immobilization	Uninformative	789536
84-74-2	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 (6.78 (5.30-8.22) mg/L)	Immobilization	Uninformative	789536
84-74-2	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 (3.82 (1.74-4.99) mg/L)	Immobilization	Uninformative	789536
84-74-2	1 Day(s), (14 Day(s))	*Daphnia magna* (Water Flea), Not reported, Not Reported, Laboratory (STOCK)	Fresh water, Aqueous (aquatic habitat), Flow-through, 180 Organism	Measured	0.08 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.08 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
84-74-2	3 Day(s), (14 Day(s))	*Daphnia magna* (Water Flea), Not reported, Not Reported, Laboratory (STOCK)	Fresh water, Aqueous (aquatic habitat), Flow-through, 180 Organism	Measured	0.08 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.08 ug/L)	ADME (biotransformation)	Uninformative	1334646
84-74-2	7 Day(s), (14 Day(s))	*Daphnia magna* (Water Flea), Not reported, Not Reported, Laboratory (STOCK)	Fresh water, Aqueous (aquatic habitat), Flow-through, 180 Organism	Measured	0.08 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.08 ug/L)	ADME (biotransformation)	Uninformative	1334646
84-74-2	14 Day(s), (14 Day(s))	*Daphnia magna* (Water Flea), Not reported, Not Reported, Laboratory (STOCK)	Fresh water, Aqueous (aquatic habitat), Flow-through, 180 Organism	Measured	0.08 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.08 ug/L)	ADME (biotransformation)	Uninformative	1334646
84-74-2	6 Day(s), (6 Day(s))	*Daphnia magna* (Water Flea), Adult, Female, Wild (COLLECTED IN GEORGIA AND KEPT IN CULTURE AT THE MAX-PLANCK INSTITUTE FOR LIMNOLOGY (PLOEN, GERMANY))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10-100 ug/L	Growth (Morphology-General morphological changes, Response Site: Not reported)	NR (10-100 ug/L)	Development/Growth	Low	1332818

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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
84-74-2	6 Day(s), (6 Day(s))	*Daphnia magna* (Water Flea), Adult (Measured in: F0 generation), Female, Wild (COLLECTED IN GEORGIA AND KEPT IN CULTURE AT THE MAX-PLANCK INSTITUTE FOR LIMNOLOGY (PLOEN, GERMANY))	Fresh water, Aqueous (aquatic habitat), Renewal, NA F0 generation	Unmeasured	0 ug/L / 10-100 ug/L	Growth (Growth-Size, Response Site: Whole organism)	NOEC (100 ug/L)	Development/Growth	Low	1332818
84-74-2	6 Day(s), (6 Day(s))	*Daphnia magna* (Water Flea), Adult (Measured in: F1 generation), Female, Wild (COLLECTED IN GEORGIA AND KEPT IN CULTURE AT THE MAX-PLANCK INSTITUTE FOR LIMNOLOGY (PLOEN, GERMANY))	Fresh water, Aqueous (aquatic habitat), Renewal, NA F1 generation	Unmeasured	0 ug/L / 10-100 ug/L	Population (Population-Sex ratio, Response Site: Not reported)	NOEC (100 ug/L)	Reproductive/Teratogenic	Low	1332818
84-74-2	6 Day(s), (6 Day(s))	*Daphnia magna* (Water Flea), Adult, Female, Wild (COLLECTED IN GEORGIA AND KEPT IN CULTURE AT THE MAX-PLANCK INSTITUTE FOR LIMNOLOGY (PLOEN, GERMANY))	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ug/L / 10-100 ug/L	Mortality (Mortality-Survivorship, Response Site: Not reported)	NOEC (100 ug/L)	Mortality	Low	1332818

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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
84-74-2	6 Day(s), (6 Day(s))	*Daphnia magna* (Water Flea), Adult (Measured in: F0 generation), Female, Wild (COLLECTED IN GEORGIA AND KEPT IN CULTURE AT THE MAX-PLANCK INSTITUTE FOR LIMNOLOGY (PLOEN, GERMANY))	Fresh water, Aqueous (aquatic habitat), Renewal, NA F0 generation	Unmeasured	0 ug/L / 10-100 ug/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEC (100 ug/L)	Reproductive/Teratogenic	Low	1332818
84-74-2	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (MIAMI UNIVERSITY, OHIO)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.001 mg/L / <0.001 mg/L / 0.029-0.044 mg/L / 0.059-0.15 mg/L / 0.33-0.50 mg/L / 0.92-1.59 mg/L / 2.08-2.80 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (3.0-7.5 mg/L)	Mortality	Medium	1336024
84-74-2	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (MIAMI UNIVERSITY, OHIO)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	<0.001 mg/L / <0.001 mg/L / 0.029-0.044 mg/L / 0.059-0.15 mg/L / 0.33-0.50 mg/L / 0.92-1.59 mg/L / 2.08-2.80 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (5.2 (4.7-5.6) mg/L)	Mortality	Medium	1336024

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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
84-74-2	8.0 Day(s), (16 Day(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (MIAMI UNIVERSITY, OHIO)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.001 mg/L / <0.001 mg/L / 0.029-0.044 mg/L / 0.059-0.15 mg/L / 0.33-0.50 mg/L / 0.92-1.59 mg/L / 2.08-2.80 mg/L	Growth (Development-Sexual development, Response Site: Not reported)	NOEC (2.08-2.80 mg/L)	Development/Growth	Medium	1336024
84-74-2	16 Day(s), (16 Day(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (MIAMI UNIVERSITY, OHIO)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.001 mg/L / <0.001 mg/L / 0.029-0.044 mg/L / 0.059-0.15 mg/L / 0.33-0.50 mg/L / 0.92-1.59 mg/L / 2.08-2.80 mg/L	Growth (Development-Sexual development, Response Site: Not reported)	LOEC (2.08-2.80 mg/L)	Development/Growth	Medium	1336024
84-74-2	16 Day(s), (16 Day(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (MIAMI UNIVERSITY, OHIO)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.001 mg/L / <0.001 mg/L / 0.029-0.044 mg/L / 0.059-0.15 mg/L / 0.33-0.50 mg/L / 0.92-1.59 mg/L / 2.08-2.80 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.029-0.044 mg/L)	Mortality	Medium	1336024
84-74-2	16 Day(s), (16 Day(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (MIAMI UNIVERSITY, OHIO)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.001 mg/L / <0.001 mg/L / 0.029-0.044 mg/L / 0.059-0.15 mg/L / 0.33-0.50 mg/L / 0.92-1.59 mg/L / 2.08-2.80 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (0.059-0.15 mg/L)	Mortality	Medium	1336024

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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
84-74-2	16 Day(s), (16 Day(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (MIAMI UNIVERSITY, OHIO)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.001 mg/L / <0.001 mg/L / 0.029-0.044 mg/L / 0.059-0.15 mg/L / 0.33-0.50 mg/L / 0.92-1.59 mg/L / 2.08-2.80 mg/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NR (2.08-2.80 mg/L)	Reproductive/Teratogenic	Medium	1336024
84-74-2	16 Day(s), (16 Day(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (MIAMI UNIVERSITY, OHIO)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.001 mg/L / <0.001 mg/L / 0.029-0.044 mg/L / 0.059-0.15 mg/L / 0.33-0.50 mg/L / 0.92-1.59 mg/L / 2.08-2.80 mg/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEC (0.92-1.56 mg/L)	Reproductive/Teratogenic	Medium	1336024
84-74-2	16 Day(s), (16 Day(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (MIAMI UNIVERSITY, OHIO)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.001 mg/L / <0.001 mg/L / 0.029-0.044 mg/L / 0.059-0.15 mg/L / 0.33-0.50 mg/L / 0.92-1.59 mg/L / 2.08-2.80 mg/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEC (0.33-0.50 mg/L)	Reproductive/Teratogenic	Medium	1336024
84-74-2	16 Day(s), (16 Day(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (MIAMI UNIVERSITY, OHIO)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.001 mg/L / <0.001 mg/L / 0.029-0.044 mg/L / 0.059-0.15 mg/L / 0.33-0.50 mg/L / 0.92-1.59 mg/L / 2.08-2.80 mg/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	LOEC (2.08-2.80 mg/L)	Reproductive/Teratogenic	Medium	1336024

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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
84-74-2	16 Day(s), (16 Day(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (MIAMI UNIVERSITY, OHIO)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.001 mg/L / <0.001 mg/L / 0.029-0.044 mg/L / 0.059-0.15 mg/L / 0.33-0.50 mg/L / 0.92-1.59 mg/L / 2.08-2.80 mg/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	LOEC (0.92-1.56 mg/L)	Reproductive/Teratogenic	Medium	1336024
84-74-2	16 Day(s), (16 Day(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory (MIAMI UNIVERSITY, OHIO)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	<0.001 mg/L / <0.001 mg/L / 0.029-0.044 mg/L / 0.059-0.15 mg/L / 0.33-0.50 mg/L / 0.92-1.59 mg/L / 2.08-2.80 mg/L	Growth (Development-Sexual development, Response Site: Not reported)	NOEC (0.92-1.56 mg/L)	Development/Growth	Medium	1336024
84-74-2	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 / 0.073 mg/L / 0.21 mg/L / 0.39 mg/L / 0.96 mg/L / 2.5 mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEC (2.5 mg/L)	Reproductive/Teratogenic	High	680120
84-74-2	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 / 0.073 mg/L / 0.21 mg/L / 0.39 mg/L / 0.96 mg/L / 2.5 mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (0.96 mg/L)	Reproductive/Teratogenic	High	680120
84-74-2	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 / 0.073 mg/L / 0.21 mg/L / 0.39 mg/L / 0.96 mg/L / 2.5 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (0.96 mg/L)	Mortality	High	680120

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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
84-74-2	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), <=24 Hour(s), Not Reported, Laboratory (SPRINGBORN LABORATO-RIES)	Fresh water, Aque-ous (aquatic habi-tat), Flow-through, Not Reported	Measured	0 mg/L / 0.073 mg/L / 0.21 mg/L / 0.39 mg/L / 0.96 mg/L / 2.5 mg/L	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	MATC (1.55 mg/L)	Reproduc-tive/Teratogenic	High	680120
84-74-2	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), <=24 Hour(s), Not Reported, Laboratory (SPRINGBORN LABORATO-RIES)	Fresh water, Aque-ous (aquatic habi-tat), Flow-through, Not Reported	Measured	0 mg/L / 0.073 mg/L / 0.21 mg/L / 0.39 mg/L / 0.96 mg/L / 2.5 mg/L	Mortality (Mortality-Survival, Re-sponse Site: Not reported)	MATC (1.55 mg/L)	Mortality	High	680120
84-74-2	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), <=24 Hour(s), Not Reported, Laboratory (SPRINGBORN LABORATO-RIES)	Fresh water, Aque-ous (aquatic habi-tat), Flow-through, Not Reported	Measured	0 mg/L / 0.073 mg/L / 0.21 mg/L / 0.39 mg/L / 0.96 mg/L / 2.5 mg/L	Mortality (Mortality-Survival, Re-sponse Site: Not reported)	LOEC (2.5 mg/L)	Mortality	High	680120
84-74-2	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Lab-oratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aque-ous (aquatic habi-tat), Static, 6 Or-ganism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-HSP70 mRNA, Response Site: Not re-ported)	LOEC (1 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
84-74-2	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Lab-oratory (FROM DAPHTOXKIT (MICRO-BIOTESTS INC., BELGIUM))	Fresh water, Aque-ous (aquatic habi-tat), Static, 6 Or-ganism	Unmeasured	0 uM / 1 uM / 10 uM	Cellular (Genetics-Mannosidase mRNA, Response Site: Not re-ported)	LOEC (1 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468

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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
84-74-2	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
84-74-2	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
84-74-2	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)	LOEC (1 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
84-74-2	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)	LOEC (1 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468

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84-74-2	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICROBIOTESTS 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 (1 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
84-74-2	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICROBIOTESTS 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)	NOEC (1 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
84-74-2	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICROBIOTESTS 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)	LOEC (1 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
84-74-2	24 Hour(s), (24 Hour(s))	*Daphnia magna* (Water Flea), Juvenile, <24 Hour(s), Not Reported, Laboratory (FROM DAPHTOXKIT (MICROBIOTESTS 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 (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
84-74-2	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
84-74-2	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
84-74-2	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)	NR (1-10 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
84-74-2	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 (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
84-74-2	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
84-74-2	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)	NR (1-10 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
84-74-2	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)	NOEC (10 uM)	Mechanistic: Biomarkers (exposure and effect)	Medium	5043468
84-74-2	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)	LOEC (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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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	Mortality (Mortality-Hatch, Response Site: Not reported)	NOEC (10 uM)	Mortality	Uninformative	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
84-74-2	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 / 10 uM	Growth (Morphology-Length, Response Site: Tail)	LOEC (10 uM)	Development/Growth	Medium	5043468
84-74-2	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 / 10 uM	Growth (Growth-Length, Response Site: Whole organism)	NOEC (10 uM)	Development/Growth	Medium	5043468
84-74-2	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 / 10 uM	Growth (Morphology-Length, Response Site: Tail)	NOEC (1 uM)	Development/Growth	Medium	5043468
84-74-2	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 / 10 uM	Growth (Morphology-Length, Response Site: Tail)	NOEC (1 uM)	Development/Growth	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
84-74-2	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 / 10 uM	Growth (Growth-Length, Response Site: Whole organism)	NOEC (1 uM)	Development/Growth	Medium	5043468
84-74-2	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 / 10 uM	Growth (Morphology-Length, Response Site: Tail)	LOEC (10 uM)	Development/Growth	Medium	5043468
84-74-2	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 / 10 uM	Growth (Growth-Length, Response Site: Whole organism)	LOEC (10 uM)	Development/Growth	Medium	5043468
84-74-2	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 / 10 uM	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEC (10 uM)	Reproductive/Teratogenic	Medium	5043468

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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
84-74-2	~37 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 / 10 uM	Mortality (Mortality-Lifespan, Response Site: Not reported)	LOEC (1 uM)	Mortality	Uninformative	5043468
84-74-2	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, Not Reported, Laboratory (KEY LABORATORY OF HYDRO-BIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Not reported)	NOEC (0.5 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053
84-74-2	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, Not Reported, Laboratory (KEY LABORATORY OF HYDRO-BIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.90 mg/L / 2.0 mg/L / 2.65 mg/L / 3.58 mg/L / 4.00 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (4.92 (4.22-6.32) mg/L)	Mortality	High	5433053

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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
84-74-2	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Neonate, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Not reported)	LOEC (0.5 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053
84-74-2	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Neonate, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Not reported)	LOEC (0.5 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053
84-74-2	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Enzyme(s)-Glutathione S-transferase, Response Site: Not reported)	LOEC (0.5 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053

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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
84-74-2	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Neonate, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Biochemistry-Hydrogen peroxide, Response Site: Not reported)	NR (0.5-2.0 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053
84-74-2	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Neonate, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.90 mg/L / 2.0 mg/L / 2.65 mg/L / 3.58 mg/L / 4.00 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (3.48 (3.09-3.99) mg/L)	Mortality	High	5433053
84-74-2	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Not reported)	LOEC (0.5 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053

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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
84-74-2	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Not reported)	LOEC (0.5 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053
84-74-2	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Biochemistry-Hydrogen peroxide, Response Site: Not reported)	LOEC (0.5 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053
84-74-2	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Neonate, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Not reported)	LOEC (0.5 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053

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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
84-74-2	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Not reported)	LOEC (2.0 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053
84-74-2	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Biochemistry-Total antioxidant capacity, Response Site: Not reported)	LOEC (0.5 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053
84-74-2	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Neonate, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Enzyme(s)-Glutathione S-transferase, Response Site: Not reported)	LOEC (0.5 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053

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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
84-74-2	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Neonate, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Biochemistry-Total antioxidant capacity, Response Site: Not reported)	LOEC (0.5 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053
84-74-2	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Neonate, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Not reported)	LOEC (0.5 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053
84-74-2	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Neonate, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Not reported)	LOEC (0.5 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053

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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
84-74-2	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Biochemistry-Total antioxidant capacity, Response Site: Not reported)	LOEC (0.5 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053
84-74-2	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Neonate, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Enzyme(s)-Glutathione S-transferase, Response Site: Not reported)	NR (0.5-2.0 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053
84-74-2	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Not reported)	LOEC (0.5 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053

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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
84-74-2	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Neonate, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Not reported)	LOEC (0.5 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053
84-74-2	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Enzyme(s)-Glutathione S-transferase, Response Site: Not reported)	LOEC (0.5 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053
84-74-2	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Not reported)	LOEC (0.5 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053

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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
84-74-2	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Not reported)	LOEC (0.5 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053
84-74-2	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Biochemistry-Hydrogen peroxide, Response Site: Not reported)	LOEC (0.5 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053
84-74-2	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Neonate, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Biochemistry-Total antioxidant capacity, Response Site: Not reported)	LOEC (0.5 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053

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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
84-74-2	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Neonate, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.90 mg/L / 2.0 mg/L / 2.65 mg/L / 3.58 mg/L / 4.00 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (2.83 (2.42-3.33) mg/L)	Mortality	High	5433053
84-74-2	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Adult, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 mg/L / 0 mg/L / 0.90 mg/L / 2.0 mg/L / 2.65 mg/L / 3.58 mg/L / 4.00 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (4.31 (3.50-6.03) mg/L)	Mortality	High	5433053
84-74-2	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), Neonate, Not Reported, Laboratory (KEY LABORATORY OF HYDROBIOLOGY AT DALIAN OCEAN UNIVERSITY, LIAONING PROVINCE, CHINA)	Fresh water, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Measured	0 mg/L / 0 mg/L / 0.5 mg/L / 2.0 mg/L	Biochemical (Biochemistry-Hydrogen peroxide, Response Site: Not reported)	LOEC (0.5 mg/L)	Mechanistic: Oxidative stress (including redox biology)	High	5433053

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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
84-74-2	24 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	1.88 mg/L / 1.88 mg/L / 2.65 mg/L / 3.58 mg/L / 3.79 mg/L / 3.88 mg/L / 4.00 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (3.04 (2.37-3.90) mg/L)	Mortality	High	4829279
84-74-2	48 Hour(s), (48 Hour(s))	*Daphnia magna* (Water Flea), <24 Hour(s), Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	1.88 mg/L / 1.88 mg/L / 2.65 mg/L / 3.58 mg/L / 3.79 mg/L / 3.88 mg/L / 4.00 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (2.55 (1.87-3.47) mg/L)	Mortality	High	4829279
84-74-2	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Not reported, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 mg/L / 0 mg/L / 0.07 mg/L / 0.23 mg/L / 0.27 mg/L / 0.42 mg/L / 0.48 mg/L	Reproduction (Reproduction-Number of days between eggs laid or litters, Response Site: Not reported)	NOEC (0.07 mg/L)	Reproductive/Teratogenic	High	4829279
84-74-2	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Not reported, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 mg/L / 0 mg/L / 0.07 mg/L / 0.23 mg/L / 0.27 mg/L / 0.42 mg/L / 0.48 mg/L	Population (Population-Population growth rate, Response Site: Not reported)	LOEC (0.48 mg/L)	Reproductive/Teratogenic	High	4829279
84-74-2	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Not reported, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 mg/L / 0 mg/L / 0.07 mg/L / 0.23 mg/L / 0.27 mg/L / 0.42 mg/L / 0.48 mg/L	Reproduction (Reproduction-Number of days between eggs laid or litters, Response Site: Not reported)	LOEC (0.23 mg/L)	Reproductive/Teratogenic	High	4829279
84-74-2	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Not reported, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 mg/L / 0 mg/L / 0.07 mg/L / 0.23 mg/L / 0.27 mg/L / 0.42 mg/L / 0.48 mg/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	LOEC (0.07 mg/L)	Reproductive/Teratogenic	High	4829279

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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
84-74-2	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Not reported, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 mg/L / 0 mg/L / 0.07 mg/L / 0.23 mg/L / 0.27 mg/L / 0.42 mg/L / 0.48 mg/L	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NR (0.07-0.48 mg/L)	Reproductive/Teratogenic	High	4829279
84-74-2	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Not reported, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 mg/L / 0 mg/L / 0.07 mg/L / 0.23 mg/L / 0.27 mg/L / 0.42 mg/L / 0.48 mg/L	Growth (Growth-Growth rate, Response Site: Not reported)	NOEC (0.48 mg/L)	Development/Growth	High	4829279
84-74-2	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Not reported, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 mg/L / 0 mg/L / 0.07 mg/L / 0.23 mg/L / 0.27 mg/L / 0.42 mg/L / 0.48 mg/L	Growth (Development-Molting, Response Site: Not reported)	NOEC (0.48 mg/L)	Development/Growth	High	4829279
84-74-2	21 Day(s), (21 Day(s))	*Daphnia magna* (Water Flea), Not reported, Not Reported, Laboratory	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 mg/L / 0 mg/L / 0.07 mg/L / 0.23 mg/L / 0.27 mg/L / 0.42 mg/L / 0.48 mg/L	Population (Population-Population growth rate, Response Site: Not reported)	NOEC (0.42 mg/L)	Reproductive/Teratogenic	High	4829279
84-74-2	1 Day(s), (14 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	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
84-74-2	3 Day(s), (14 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	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.10 ug/L)	ADME (biotransformation)	Uninformative	1334646
84-74-2	7 Day(s), (14 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	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.10 ug/L)	ADME (biotransformation)	Uninformative	1334646
84-74-2	14 Day(s), (14 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	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.10 ug/L)	ADME (biotransformation)	Uninformative	1334646
84-74-2	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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CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
84-74-2	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
84-74-2	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
84-74-2	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	0.08 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.08 ug/L)	ADME (biotransformation)	Uninformative	1334646
84-74-2	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	0.08 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.08 ug/L)	ADME (biotransformation)	Uninformative	1334646
84-74-2	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	0.08 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.08 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
84-74-2	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	0.025 (0.010-0.068) mg/L / <0.111 (<0.002-0.320) mg/L / 0.573 (0.069-0.714) mg/L / 4.76 (1.29-8.40) mg/L / 10.7 (8.30-15.1) mg/L / 13.2 (9.32-15.4) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (10.7 (8.30-15.1) mg/L)	Development/Growth	High	679311
84-74-2	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	<0.768 (<0.320-1.69) mg/kg dw sediment / 41.6 (15.0-61.1) mg/kg dw sediment / 360 (204-473) mg/kg dw sediment / 1260 (982-1460) mg/kg dw sediment / 4820 (3780-5340) mg/kg dw sediment / 17400 (17100-19100) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	NR (41.6-17400 mg/kg dw sediment)	Development/Growth	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
84-74-2	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	<19.4 (0.816-55.9) mg/kg dw sediment / 152 (15.0-430) mg/kg dw sediment / 608 (418-779) mg/kg dw sediment / 3410 (2420-4300) mg/kg dw sediment / 26200 (23100-32200) mg/kg dw sediment / 71900 (57200-88200) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (71900 (57200-88200) mg/kg dw sediment)	Mortality	High	679311
84-74-2	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	<19.4 (0.816-55.9) mg/kg dw sediment / 152 (15.0-430) mg/kg dw sediment / 608 (418-779) mg/kg dw sediment / 3410 (2420-4300) mg/kg dw sediment / 26200 (23100-32200) mg/kg dw sediment / 71900 (57200-88200) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (26200 (23100-32200) mg/kg dw sediment)	Development/Growth	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
84-74-2	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	0.025 (0.010-0.068) mg/L / <0.111 (<0.002-0.320) mg/L / 0.573 (0.069-0.714) mg/L / 4.76 (1.29-8.40) mg/L / 10.7 (8.30-15.1) mg/L / 13.2 (9.32-15.4) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (10.7 (8.30-15.1) mg/L)	Development/Growth	High	679311
84-74-2	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	0.025 (0.010-0.068) mg/L / <0.111 (<0.002-0.320) mg/L / 0.573 (0.069-0.714) mg/L / 4.76 (1.29-8.40) mg/L / 10.7 (8.30-15.1) mg/L / 13.2 (9.32-15.4) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (13.2 (9.32-15.4) mg/L)	Mortality	High	679311
84-74-2	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	0.025 (0.010-0.068) mg/L / <0.111 (<0.002-0.320) mg/L / 0.573 (0.069-0.714) mg/L / 4.76 (1.29-8.40) mg/L / 10.7 (8.30-15.1) mg/L / 13.2 (9.32-15.4) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (4.76 (1.29-8.40) mg/L)	Development/Growth	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
84-74-2	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	1.12 (<0.522-1.88) mg/kg dw sediment / 72.6 (15.0-148) mg/kg dw sediment / 748 (575-886) mg/kg dw sediment / 3340 (2760-3930) mg/kg dw sediment / 9970 (9060-10900) mg/kg dw sediment / 29500 (24500-35600) mg/kg dw sediment	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>29500 mg/kg dw sediment)	Mortality	High	679311
84-74-2	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	1.12 (<0.522-1.88) mg/kg dw sediment / 72.6 (15.0-148) mg/kg dw sediment / 748 (575-886) mg/kg dw sediment / 3340 (2760-3930) mg/kg dw sediment / 9970 (9060-10900) mg/kg dw sediment / 29500 (24500-35600) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (3340 (2760-3930) mg/kg dw sediment)	Development/Growth	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
84-74-2	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	1.12 (<0.522-1.88) mg/kg dw sediment / 72.6 (15.0-148) mg/kg dw sediment / 748 (575-886) mg/kg dw sediment / 3340 (2760-3930) mg/kg dw sediment / 9970 (9060-10900) mg/kg dw sediment / 29500 (24500-35600) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (29500 (24500-35600) mg/kg dw sediment)	Mortality	High	679311
84-74-2	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	1.12 (<0.522-1.88) mg/kg dw sediment / 72.6 (15.0-148) mg/kg dw sediment / 748 (575-886) mg/kg dw sediment / 3340 (2760-3930) mg/kg dw sediment / 9970 (9060-10900) mg/kg dw sediment / 29500 (24500-35600) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (748 (575-886) mg/kg dw sediment)	Development/Growth	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
84-74-2	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	<0.005 (<0.004-0.010) mg/L / 0.391 (0.089-1.18) mg/L / 4.20 (2.55-7.65) mg/L / 12.9 (10.6-15.7) mg/L / 26.5 (18.4-45.0) mg/L / 50.5 (33.3-70.4) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (12.9 (10.6-15.7) mg/L)	Development/Growth	High	679311
84-74-2	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	<0.005 (<0.004-0.010) mg/L / 0.391 (0.089-1.18) mg/L / 4.20 (2.55-7.65) mg/L / 12.9 (10.6-15.7) mg/L / 26.5 (18.4-45.0) mg/L / 50.5 (33.3-70.4) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (4.20 (2.55-7.65) mg/L)	Development/Growth	High	679311
84-74-2	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	<0.005 (<0.004-0.010) mg/L / 0.391 (0.089-1.18) mg/L / 4.20 (2.55-7.65) mg/L / 12.9 (10.6-15.7) mg/L / 26.5 (18.4-45.0) mg/L / 50.5 (33.3-70.4) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (50.5 (33.3-70.4) 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
84-74-2	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	<0.007 (<0.005-0.012) mg/L / 0.702 (0.101-1.63) mg/L / 4.59 (2.28-6.87) mg/L / 8.84 (5.95-11.6) mg/L / 14.1 (12.1-17.0) mg/L / 62.9 (44.1-107) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (62.9 (44.1-107) mg/L)	Mortality	High	679311
84-74-2	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	<0.007 (<0.005-0.012) mg/L / 0.702 (0.101-1.63) mg/L / 4.59 (2.28-6.87) mg/L / 8.84 (5.95-11.6) mg/L / 14.1 (12.1-17.0) mg/L / 62.9 (44.1-107) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NR (0.101-107 mg/L)	Development/Growth	High	679311
84-74-2	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	<0.768 (<0.320-1.69) mg/kg dw sediment / 41.6 (15.0-61.1) mg/kg dw sediment / 360 (204-473) mg/kg dw sediment / 1260 (982-1460) mg/kg dw sediment / 4820 (3780-5340) mg/kg dw sediment / 17400 (17100-19100) mg/kg dw sediment	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>17400 mg/kg dw sediment)	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
84-74-2	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	<0.768 (<0.320-1.69) mg/kg dw sediment / 41.6 (15.0-61.1) mg/kg dw sediment / 360 (204-473) mg/kg dw sediment / 1260 (982-1460) mg/kg dw sediment / 4820 (3780-5340) mg/kg dw sediment / 17400 (17100-19100) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (17400 (17100-19100) mg/kg dw sediment)	Mortality	High	679311
84-74-2	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	<0.768 (<0.320-1.69) mg/kg dw sediment / 41.6 (15.0-61.1) mg/kg dw sediment / 360 (204-473) mg/kg dw sediment / 1260 (982-1460) mg/kg dw sediment / 4820 (3780-5340) mg/kg dw sediment / 17400 (17100-19100) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	NR (41.6-17400 mg/kg dw sediment)	Development/Growth	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
84-74-2	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	<19.4 (0.816-55.9) mg/kg dw sediment / 152 (15.0-430) mg/kg dw sediment / 608 (418-779) mg/kg dw sediment / 3410 (2420-4300) mg/kg dw sediment / 26200 (23100-32200) mg/kg dw sediment / 71900 (57200-88200) mg/kg dw sediment	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>71900 mg/kg dw sediment)	Mortality	High	679311
84-74-2	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	<0.768 (<0.320-1.69) mg/kg dw sediment / 41.6 (15.0-61.1) mg/kg dw sediment / 360 (204-473) mg/kg dw sediment / 1260 (982-1460) mg/kg dw sediment / 4820 (3780-5340) mg/kg dw sediment / 17400 (17100-19100) mg/kg dw sediment	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>17400 mg/kg dw sediment)	Mortality	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
84-74-2	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	<19.4 (0.816-55.9) mg/kg dw sediment / 152 (15.0-430) mg/kg dw sediment / 608 (418-779) mg/kg dw sediment / 3410 (2420-4300) mg/kg dw sediment / 26200 (23100-32200) mg/kg dw sediment / 71900 (57200-88200) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (26200 (23100-32200) mg/kg dw sediment)	Development/Growth	High	679311
84-74-2	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	<19.4 (0.816-55.9) mg/kg dw sediment / 152 (15.0-430) mg/kg dw sediment / 608 (418-779) mg/kg dw sediment / 3410 (2420-4300) mg/kg dw sediment / 26200 (23100-32200) mg/kg dw sediment / 71900 (57200-88200) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (3410 (2420-4300) 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
84-74-2	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	<19.4 (0.816-55.9) mg/kg dw sediment / 152 (15.0-430) mg/kg dw sediment / 608 (418-779) mg/kg dw sediment / 3410 (2420-4300) mg/kg dw sediment / 26200 (23100-32200) mg/kg dw sediment / 71900 (57200-88200) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (71900 (57200-88200) mg/kg dw sediment)	Mortality	High	679311
84-74-2	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	<19.4 (0.816-55.9) mg/kg dw sediment / 152 (15.0-430) mg/kg dw sediment / 608 (418-779) mg/kg dw sediment / 3410 (2420-4300) mg/kg dw sediment / 26200 (23100-32200) mg/kg dw sediment / 71900 (57200-88200) mg/kg dw sediment	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>71900 mg/kg dw sediment)	Mortality	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
84-74-2	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	0.025 (0.010-0.068) mg/L / <0.111 (<0.002-0.320) mg/L / 0.573 (0.069-0.714) mg/L / 4.76 (1.29-8.40) mg/L / 10.7 (8.30-15.1) mg/L / 13.2 (9.32-15.4) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (13.2 (9.32-15.4) mg/L)	Mortality	High	679311
84-74-2	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	<19.4 (0.816-55.9) mg/kg dw sediment / 152 (15.0-430) mg/kg dw sediment / 608 (418-779) mg/kg dw sediment / 3410 (2420-4300) mg/kg dw sediment / 26200 (23100-32200) mg/kg dw sediment / 71900 (57200-88200) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (3410 (2420-4300) mg/kg dw sediment)	Development/Growth	High	679311
84-74-2	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	0.025 (0.010-0.068) mg/L / <0.111 (<0.002-0.320) mg/L / 0.573 (0.069-0.714) mg/L / 4.76 (1.29-8.40) mg/L / 10.7 (8.30-15.1) mg/L / 13.2 (9.32-15.4) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (4.76 (1.29-8.40) mg/L)	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
84-74-2	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	1.12 (<0.522-1.88) mg/kg dw sediment / 72.6 (15.0-148) mg/kg dw sediment / 748 (575-886) mg/kg dw sediment / 3340 (2760-3930) mg/kg dw sediment / 9970 (9060-10900) mg/kg dw sediment / 29500 (24500-35600) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (3340 (2760-3930) mg/kg dw sediment)	Development/Growth	High	679311
84-74-2	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	1.12 (<0.522-1.88) mg/kg dw sediment / 72.6 (15.0-148) mg/kg dw sediment / 748 (575-886) mg/kg dw sediment / 3340 (2760-3930) mg/kg dw sediment / 9970 (9060-10900) mg/kg dw sediment / 29500 (24500-35600) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (29500 (24500-35600) mg/kg dw sediment)	Mortality	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
84-74-2	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	1.12 (<0.522-1.88) mg/kg dw sediment / 72.6 (15.0-148) mg/kg dw sediment / 748 (575-886) mg/kg dw sediment / 3340 (2760-3930) mg/kg dw sediment / 9970 (9060-10900) mg/kg dw sediment / 29500 (24500-35600) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (748 (575-886) mg/kg dw sediment)	Development/Growth	High	679311
84-74-2	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	<0.005 (<0.004-0.010) mg/L / 0.391 (0.089-1.18) mg/L / 4.20 (2.55-7.65) mg/L / 12.9 (10.6-15.7) mg/L / 26.5 (18.4-45.0) mg/L / 50.5 (33.3-70.4) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (12.9 (10.6-15.7) mg/L)	Development/Growth	High	679311
84-74-2	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	<0.005 (<0.004-0.010) mg/L / 0.391 (0.089-1.18) mg/L / 4.20 (2.55-7.65) mg/L / 12.9 (10.6-15.7) mg/L / 26.5 (18.4-45.0) mg/L / 50.5 (33.3-70.4) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (4.20 (2.55-7.65) mg/L)	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
84-74-2	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	<0.005 (<0.004-0.010) mg/L / 0.391 (0.089-1.18) mg/L / 4.20 (2.55-7.65) mg/L / 12.9 (10.6-15.7) mg/L / 26.5 (18.4-45.0) mg/L / 50.5 (33.3-70.4) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (50.5 (33.3-70.4) mg/L)	Mortality	High	679311
84-74-2	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	<0.007 (<0.005-0.012) mg/L / 0.702 (0.101-1.63) mg/L / 4.59 (2.28-6.87) mg/L / 8.84 (5.95-11.6) mg/L / 14.1 (12.1-17.0) mg/L / 62.9 (44.1-107) mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (62.9 (44.1-107) mg/L)	Mortality	High	679311
84-74-2	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	<0.007 (<0.005-0.012) mg/L / 0.702 (0.101-1.63) mg/L / 4.59 (2.28-6.87) mg/L / 8.84 (5.95-11.6) mg/L / 14.1 (12.1-17.0) mg/L / 62.9 (44.1-107) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	NR (0.101-107 mg/L)	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
84-74-2	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	1.12 (<0.522-1.88) mg/kg dw sediment / 72.6 (15.0-148) mg/kg dw sediment / 748 (575-886) mg/kg dw sediment / 3340 (2760-3930) mg/kg dw sediment / 9970 (9060-10900) mg/kg dw sediment / 29500 (24500-35600) mg/kg dw sediment	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>29500 mg/kg dw sediment)	Mortality	High	679311
84-74-2	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	<0.768 (<0.320-1.69) mg/kg dw sediment / 41.6 (15.0-61.1) mg/kg dw sediment / 360 (204-473) mg/kg dw sediment / 1260 (982-1460) mg/kg dw sediment / 4820 (3780-5340) mg/kg dw sediment / 17400 (17100-19100) mg/kg dw sediment	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (17400 (17100-19100) mg/kg dw sediment)	Mortality	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
84-74-2	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	<0.05 mg/L / 0.22 mg/L / 0.48 mg/L / 1.13 mg/L / 2.26 mg/L / 4.40 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-LETH (4.40 mg/L)	Mortality	High	679312
84-74-2	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	<0.05 mg/L / 0.22 mg/L / 0.48 mg/L / 1.13 mg/L / 2.26 mg/L / 4.40 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (0.63 (0.45-0.87) mg/L)	Mortality	High	679312
84-74-2	10 Day(s), (10 Day(s))	*Hyalella azteca* (Scud), Neonate, 7-14 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Leaching , Not Reported	Measured	0.005 (<0.004-0.026) mg/L / 0.391 (0.089-2.93) mg/L / 4.20 (1.25-8.02) mg/L / 12.9 (10.6-15.7) mg/L / 26.5 (13.8-45.0) mg/L / 50.5 (33.3-70.4) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (82.4 mg/L)	Mortality	High	7325945

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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
84-74-2	10 Day(s), (10 Day(s))	*Hyalella azteca* (Scud), Neonate, 7-14 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.05 mg/L / 0.22 (0.05-0.45) mg/L / 0.48 (0.19-0.79) mg/L / 1.13 (0.58-1.59) mg/L / 2.26 (1.48-2.86) mg/L / 4.40 (2.99-5.31) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (0.59 (0.44-1.13) mg/L)	Mortality	High	7325945
84-74-2	10 Day(s), (10 Day(s))	*Hyalella azteca* (Scud), Neonate, 7-14 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Leaching , Not Reported	Measured	0.005 (<0.004-0.026) mg/L / 0.391 (0.089-2.93) mg/L / 4.20 (1.25-8.02) mg/L / 12.9 (10.6-15.7) mg/L / 26.5 (13.8-45.0) mg/L / 50.5 (33.3-70.4) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	MATC (7.36 mg/L)	Development/Growth	High	7325945
84-74-2	10 Day(s), (10 Day(s))	*Hyalella azteca* (Scud), Neonate, 7-14 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Leaching , Not Reported	Measured	0.006 (<0.005-0.020) mg/L / 0.702 (0.101-2.69) mg/L / 4.59 (2.28-8.31) mg/L / 8.84 (5.40-13.2) mg/L / 14.1 (12.1-21.6) mg/L / 62.9 (33.3-70.4) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	MATC (11.2 mg/L)	Development/Growth	High	7325945

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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
84-74-2	10 Day(s), (10 Day(s))	*Hyalella azteca* (Scud), Neonate, 7-14 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Leaching , Not Reported	Measured	0.025 (<0.002-0.68) mg/L / 0.111 (<0.002-1.52) mg/L / 0.573 (0.069-4.67) mg/L / 4.76 (1.29-12.3) mg/L / 10.7 (8.30-12.83) mg/L / 13.2 (9.32-15.4) mg/L	Growth (Growth-Weight, Response Site: Whole organism)	MATC (7.14 mg/L)	Development/Growth	High	7325945
84-74-2	10 Day(s), (10 Day(s))	*Hyalella azteca* (Scud), Neonate, 7-14 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	0.788 (<0.320-1.69) mg/kg dw sediment / 41.6 (15.0-61.1) mg/kg dw sediment / 360 (204-473) mg/kg dw sediment / 1262 (962-1462) mg/kg dw sediment / 4817 (3776-5336) mg/kg dw sediment / 17450 (15612-19101) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	MATC (2460 mg/kg dw sediment)	Development/Growth	High	7325945

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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
84-74-2	10 Day(s), (10 Day(s))	*Hyalella azteca* (Scud), Neonate, 7-14 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	1.12 (<0.522-1.88) mg/kg dw sediment / 72.6 (15.0-148) mg/kg dw sediment / 748 (575-888) mg/kg dw sediment / 3339 (2761-3928) mg/kg dw sediment / 9966 (9064-10881) mg/kg dw sediment / 29493 (24540-35647) mg/kg dw sediment	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (52363 mg/kg dw sediment)	Mortality	High	7325945
84-74-2	10 Day(s), (10 Day(s))	*Hyalella azteca* (Scud), Neonate, 7-14 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	1.12 (<0.522-1.88) mg/kg dw sediment / 72.6 (15.0-148) mg/kg dw sediment / 748 (575-888) mg/kg dw sediment / 3339 (2761-3928) mg/kg dw sediment / 9966 (9064-10881) mg/kg dw sediment / 29493 (24540-35647) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	MATC (1580 mg/kg dw sediment)	Development/Growth	High	7325945

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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
84-74-2	10 Day(s), (10 Day(s))	*Hyalella azteca* (Scud), Neonate, 7-14 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Sediment, Not Reported	Measured	19.4 (<0.813-55.9) mg/kg dw sediment / 152 (15.0-430) mg/kg dw sediment / 608 (418-779) mg/kg dw sediment / 3407 (2416-4297) mg/kg dw sediment / 26164 (23108-32167) mg/kg dw sediment / 71931 (57213-88194) mg/kg dw sediment	Growth (Growth-Weight, Response Site: Whole organism)	MATC (9450 mg/kg dw sediment)	Development/Growth	High	7325945
84-74-2	10 Day(s), (10 Day(s))	*Hyalella azteca* (Scud), Neonate, 7-14 Day(s), Not Reported, Laboratory (CULTURES STARTED AT THE U.S. ENVIRONMENTAL PROTECTION AGENCY LABORATORY, DULUTH, MN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.05 mg/L / 0.22 (0.05-0.45) mg/L / 0.48 (0.19-0.79) mg/L / 1.13 (0.58-1.59) mg/L / 2.26 (1.48-2.86) mg/L / 4.40 (2.99-5.31) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (0.62 (0.31-0.93) mg/L)	Mortality	High	7325945
84-74-2	1 Day(s), (7 Day(s))	*Ischnura verticalis* (Damselfly), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 9 Organism	Measured	0.10 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
84-74-2	3 Day(s), (7 Day(s))	*Ischnura verticalis* (Damselfly), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 9 Organism	Measured	0.10 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.10 ug/L)	ADME (biotransformation)	Uninformative	1334646
84-74-2	7 Day(s), (7 Day(s))	*Ischnura verticalis* (Damselfly), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 9 Organism	Measured	0.10 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.10 ug/L)	ADME (biotransformation)	Uninformative	1334646
84-74-2	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
84-74-2	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)	NOEC (100 ug/ml)	Mechanistic: Cell signaling/function	Medium	789598
84-74-2	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
84-74-2	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)	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
84-74-2	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
84-74-2	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)	LOEC (100 ug/ml)	Mechanistic: Cell signaling/function	Medium	789598
84-74-2	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)	NOEC (100 ug/ml)	Mechanistic: Cell signaling/function	Medium	789598
84-74-2	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
84-74-2	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
84-74-2	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)	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
84-74-2	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
84-74-2	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)	NOEC (100 ug/ml)	Mechanistic: Cell signaling/function	Medium	789598
84-74-2	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
84-74-2	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)	LOEC (100 ug/ml)	Mechanistic: Cell signaling/function	Medium	789598
84-74-2	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
84-74-2	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)	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
84-74-2	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 (1.7 (1.3-2.2) mg/L)	Mortality	Medium	51937
84-74-2	96 Hour(s), (96 Hour(s))	*Orconectes nais* (Crayfish), 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 (>10 mg/L)	Mortality	Uninformative	1334646
84-74-2	1 Day(s), (3 Day(s))	*Palaemonetes kadiakensis* (Grass Shrimp,Freshwater Prawn), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 9 Organism	Measured	0.08 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.08 ug/L)	ADME (biotransformation)	Uninformative	1334646
84-74-2	3 Day(s), (3 Day(s))	*Palaemonetes kadiakensis* (Grass Shrimp,Freshwater Prawn), Not reported, Not Reported, Wild (FROM STREAM OR POND IN CENTRAL MISSOURI)	Fresh water, Aqueous (aquatic habitat), Flow-through, 9 Organism	Measured	0.08 ug/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	BCF (0.08 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
84-74-2	96 Hour(s), (96 Hour(s))	*Palaemonetes pugio* (Daggerblade Grass Shrimp), Adult, Not Reported, Wild (COLLECTED FROM VEGETATED SHORELINES ALONG SANTA ROSA SOUND NEAR THE ENVIRONMENTAL RESEARCH LABORATORY AT GULF BREEZE (ERL/GB), FL)	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Chemical analysis reported	NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (1000 ug/L)	Mortality	Low	5557723
84-74-2	96 Hour(s), (10 Day(s))	*Palaemonetes pugio* (Daggerblade Grass Shrimp), Adult, Not Reported, Wild (COLLECTED FROM VEGETATED SHORELINES ALONG SANTA ROSA SOUND NEAR THE ENVIRONMENTAL RESEARCH LABORATORY AT GULF BREEZE (ERL/GB), FL)	Salt water, Aqueous (aquatic habitat), Sediment, Not Reported	Chemical analysis reported	NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (10000 ug/kg dw sediment)	Mortality	Low	5557723

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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
84-74-2	10 Day(s), (10 Day(s))	*Palaemonetes pugio* (Daggerblade Grass Shrimp), Adult, Not Reported, Wild (COLLECTED FROM VEGETATED SHORELINES ALONG SANTA ROSA SOUND NEAR THE ENVIRONMENTAL RESEARCH LABORATORY AT GULF BREEZE (ERL/GB), FL)	Salt water, Aqueous (aquatic habitat), Sediment, Not Reported	Chemical analysis reported	NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (10000 ug/kg dw sediment)	Mortality	Low	5557723
84-74-2	3-4 Day(s), (38 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 / 0.092 ppm / 0.390 ppm / 0.885 ppm / 2.5-10.60 ppm / 21.5 ppm	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-LETH (2.5-10.60 ppm)	Mortality	Medium	1333217
84-74-2	38 Day(s), (38 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 / 0.092 ppm / 0.390 ppm / 0.885 ppm / 2.5-10.60 ppm / 21.5 ppm	Accumulation (Accumulation-Residue, Response Site: Whole organism)	NR (0.092-21.5 ppm)	ADME (biotransformation)	Medium	1333217

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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
84-74-2	38 Day(s), (38 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 / 0.092 ppm / 0.390 ppm / 0.885 ppm / 2.5-10.60 ppm / 21.5 ppm	Growth (Development-Molting, Response Site: Not reported)	NR (0.092-21.5 ppm)	Development/Growth	Medium	1333217
84-74-2	38 Day(s), (38 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 / 0.092 ppm / 0.390 ppm / 0.885 ppm / 2.5-10.60 ppm / 21.5 ppm	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	NOEC (21.5 ppm)	Development/Growth	Medium	1333217
84-74-2	1-38 Day(s), (38 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 / 0.092 ppm / 0.390 ppm / 0.885 ppm / 2.5-10.60 ppm / 21.5 ppm	Mortality (Mortality-Survival, Response Site: Not reported)	NR (0.092-21.5 ppm)	Mortality	Medium	1333217
84-74-2	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)	NOEC (2.35 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
84-74-2	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 (6.29 mg/L)	Mortality	High	1321996
84-74-2	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	<0.00054-0.012 AI mg/L / 0.79-1.0 AI mg/L / 1.5-1.6 AI mg/L / 2.2-2.5 AI mg/L / 3.8-3.9 AI mg/L / 6.3-7.7 AI mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>6.3 AI mg/L)	Mortality	High	1316219
84-74-2	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	<0.00054-0.012 AI mg/L / 0.79-1.0 AI mg/L / 1.5-1.6 AI mg/L / 2.2-2.5 AI mg/L / 3.8-3.9 AI mg/L / 6.3-7.7 AI mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (5.8 (5.0-7.0) AI mg/L)	Mortality	High	1316219
84-74-2	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
84-74-2	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

* 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
84-74-2	4 Day(s), (21 Day(s))	*Glandirana rugosa* (Japanese Wrinkled Frog), Tadpole, 19 Days post fertilization, Male, Laboratory (FROM WEST JAPAN STRAIN FEMALE AND NORTH JAPAN STRAIN MALE CROSS)	Fresh water, Aqueous (aquatic habitat), Static, 20 Organism	Unmeasured	0 uM / 0 uM / 0.1 uM / 1 uM / 10 uM	Growth (Morphology-Imposex, intersex conditions, Response Site: Gonad(s))	NOEC (1 uM)	Reproductive/Teratogenic	Medium	676307
84-74-2	4 Day(s), (21 Day(s))	*Glandirana rugosa* (Japanese Wrinkled Frog), Tadpole, 19 Days post fertilization, Male, Laboratory (FROM WEST JAPAN STRAIN FEMALE AND NORTH JAPAN STRAIN MALE CROSS)	Fresh water, Aqueous (aquatic habitat), Static, 8 Organism	Unmeasured	0 uM / 0 uM / 0.1 uM / 1 uM / 10 uM	Growth (Morphology-Imposex, intersex conditions, Response Site: Gonad(s))	NOEC (1 uM)	Reproductive/Teratogenic	Medium	676307
84-74-2	4 Day(s), (21 Day(s))	*Glandirana rugosa* (Japanese Wrinkled Frog), Tadpole, 19 Days post fertilization, Male, Laboratory (FROM WEST JAPAN STRAIN FEMALE AND NORTH JAPAN STRAIN MALE CROSS)	Fresh water, Aqueous (aquatic habitat), Static, 2 Organism	Unmeasured	0 uM / 0 uM / 0.1 uM / 1 uM / 10 uM	Growth (Morphology-Imposex, intersex conditions, Response Site: Gonad(s))	NOEC (1 uM)	Reproductive/Teratogenic	Medium	676307

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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
84-74-2	4 Day(s), (21 Day(s))	*Glandirana rugosa* (Japanese Wrinkled Frog), Tadpole, 19 Days post fertilization, Male, Laboratory (FROM WEST JAPAN STRAIN FEMALE AND NORTH JAPAN STRAIN MALE CROSS)	Fresh water, Aqueous (aquatic habitat), Static, 0 Organism	Unmeasured	0 uM / 0 uM / 0.1 uM / 1 uM / 10 uM	Growth (Morphology-Imposex, intersex conditions, Response Site: Gonad(s))	NOEC (1 uM)	Reproductive/Teratogenic	Medium	676307
84-74-2	4 Day(s), (21 Day(s))	*Glandirana rugosa* (Japanese Wrinkled Frog), Tadpole, 19 Days post fertilization, Male, Laboratory (FROM WEST JAPAN STRAIN FEMALE AND NORTH JAPAN STRAIN MALE CROSS)	Fresh water, Aqueous (aquatic habitat), Static, 4 Organism	Unmeasured	0 uM / 0 uM / 0.1 uM / 1 uM / 10 uM	Growth (Morphology-Imposex, intersex conditions, Response Site: Gonad(s))	LOEC (10 uM)	Reproductive/Teratogenic	Medium	676307
84-74-2	4 Day(s), (21 Day(s))	*Glandirana rugosa* (Japanese Wrinkled Frog), Tadpole, 19 Days post fertilization, Male, Laboratory (FROM WEST JAPAN STRAIN FEMALE AND NORTH JAPAN STRAIN MALE CROSS)	Fresh water, Aqueous (aquatic habitat), Static, 14 Organism	Unmeasured	0 uM / 0 uM / 0.1 uM / 1 uM / 10 uM	Growth (Morphology-Imposex, intersex conditions, Response Site: Gonad(s))	LOEC (10 uM)	Reproductive/Teratogenic	Medium	676307

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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
84-74-2	4 Day(s), (21 Day(s))	*Glandirana rugosa* (Japanese Wrinkled Frog), Tadpole, 19 Days post fertilization, Male, Laboratory (FROM WEST JAPAN STRAIN FEMALE AND NORTH JAPAN STRAIN MALE CROSS)	Fresh water, Aqueous (aquatic habitat), Static, 11 Organism	Unmeasured	0 uM / 0 uM / 0.1 uM / 1 uM / 10 uM	Growth (Morphology-Imposex, intersex conditions, Response Site: Gonad(s))	LOEC (10 uM)	Reproductive/Teratogenic	Medium	676307
84-74-2	4 Day(s), (21 Day(s))	*Glandirana rugosa* (Japanese Wrinkled Frog), Tadpole, 19 Days post fertilization, Male, Laboratory (FROM WEST JAPAN STRAIN FEMALE AND NORTH JAPAN STRAIN MALE CROSS)	Fresh water, Aqueous (aquatic habitat), Static, 1 Organism	Unmeasured	0 uM / 0 uM / 0.1 uM / 1 uM / 10 uM	Growth (Morphology-Imposex, intersex conditions, Response Site: Gonad(s))	LOEC (10 uM)	Reproductive/Teratogenic	Medium	676307
84-74-2	1 Day(s), (4 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 10 Organism	Unmeasured	0 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L / 1.0 mg/L / 10 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NR (1.0 mg/L)	Mortality	Medium	10064183

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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
84-74-2	2 Day(s), (4 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 10 Organism	Unmeasured	0 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L / 1.0 mg/L / 10 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-LETH (1.0 mg/L)	Mortality	Medium	10064183
84-74-2	1-2 Day(s), (4 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 10 Organism	Unmeasured	0 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L / 1.0 mg/L / 10 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NR (1.0 mg/L)	Mortality	Medium	10064183

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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
84-74-2	3 Day(s), (4 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 10 Organism	Unmeasured	0 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L / 1.0 mg/L / 10 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-LETH (1.0 mg/L)	Mortality	Medium	10064183
84-74-2	4 Day(s), (4 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 20 Organism	Unmeasured	0 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L / 1.0 mg/L / 10 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (0.1 mg/L)	Mortality	Medium	10064183

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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
84-74-2	>0-4 Day(s), (4 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 20 Organism	Unmeasured	0 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L / 1.0 mg/L / 10 mg/L	Behavior (Behavior-No response, Response Site: Not reported)	NR (0.01-10 mg/L)	Behavioral	Medium	10064183
84-74-2	4 Day(s), (4 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Unmeasured	0 mg/L / 0.01 mg/L / 0.05 mg/L / 0.1 mg/L / 1.0 mg/L / 10 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC0 (0.1 mg/L)	Mortality	Medium	10064183

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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
84-74-2	7 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 5 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (3.30-8.15 ug/L)	Development/Growth	High	10064183
84-74-2	7 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 5 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Growth (Morphology-Ratio, Response Site: Hindlimb)	NOEC (87.6-172 ug/L)	Development/Growth	High	10064183

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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
84-74-2	7 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 5 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (7.63-19.6 ug/L)	Development/Growth	High	10064183
84-74-2	7 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 5 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Growth (Growth-Snout-vent length, Response Site: Whole organism)	LOEC (7.63-19.6 ug/L)	Development/Growth	High	10064183

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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
84-74-2	7 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 5 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Growth (Morphology-Length, Response Site: Hindlimb)	LOEC (23.8-49.7 ug/L)	Development/Growth	High	10064183
84-74-2	7 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 5 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Growth (Morphology-Length, Response Site: Hindlimb)	NOEC (7.63-19.6 ug/L)	Development/Growth	High	10064183

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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
84-74-2	7 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 5 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Growth (Growth-Snout-vent length, Response Site: Whole organism)	NOEC (2.30-8.15 ug/L)	Development/Growth	High	10064183
84-74-2	21 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Behavior (Behavior-Equilibrium,Movements, number of,Swimming, Response Site: Not reported)	NR (2.30-172 ug/L)	Behavioral	High	10064183

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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
84-74-2	21 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 15 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Growth (Morphology-Ratio, Response Site: Hindlimb)	NOEC (46.0 (23.8-59.9) ug/L)	Development/Growth	High	10064183
84-74-2	21 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 4-10 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Growth (Growth-Snout-vent length, Response Site: Whole organism)	LOEC (13.4 (7.63-19.6) ug/L)	Development/Growth	High	10064183

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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
84-74-2	21 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 4-10 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (13.4 (7.63-19.6) ug/L)	Development/Growth	High	10064183
84-74-2	21 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 5-11 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Growth (Growth-Snout-vent length, Response Site: Whole organism)	LOEC (13.4 (7.63-19.6) ug/L)	Development/Growth	High	10064183

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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
84-74-2	21 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 15 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Growth (Morphology-Ratio, Response Site: Hindlimb)	LOEC (143.2 (87.6-172) ug/L)	Development/Growth	High	10064183
84-74-2	21 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 20 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Cellular (Histology-Hypertrophy, Response Site: Thyroid)	LOEC (13.4 (7.63-19.6) ug/L)	Endocrine	High	10064183

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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
84-74-2	21 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Growth (Morphology-Abnormal, Response Site: Spine, backbone,Whole organism)	NR (2.30-172 ug/L)	Development/Growth	High	10064183
84-74-2	21 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 60 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (143.2 (87.6-172) ug/L)	Mortality	High	10064183

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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
84-74-2	21 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 5-7 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (46.0 (23.8-59.9) ug/L)	Development/Growth	High	10064183
84-74-2	21 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 5-11 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (13.4 (7.63-19.6) ug/L)	Development/Growth	High	10064183

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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
84-74-2	21 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 20 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Cellular (Histology-Hyperplasia, Response Site: Thyroid)	NOEC (143.2 (87.6-172) ug/L)	Endocrine	High	10064183
84-74-2	21 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 60 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	NOEC (143.2 (87.6-172) ug/L)	Development/Growth	High	10064183

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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
84-74-2	21 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 20 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Cellular (Histology-Hypertrophy, Response Site: Thyroid)	NOEC (4.76 (2.30-8.15) ug/L)	Endocrine	High	10064183
84-74-2	21 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 15 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Growth (Morphology-Length, Response Site: Hindlimb)	LOEC (13.4 (7.63-19.6) ug/L)	Development/Growth	High	10064183

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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
84-74-2	21 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 9-13 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Growth (Growth-Snout-vent length, Response Site: Whole organism)	NOEC (4.76 (2.30-8.15) ug/L)	Development/Growth	High	10064183
84-74-2	21 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 2-6 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Growth (Growth-Snout-vent length, Response Site: Whole organism)	NOEC (4.76 (2.30-8.15) ug/L)	Development/Growth	High	10064183

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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
84-74-2	21 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 20 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Cellular (Histology-Hypertrophy, Response Site: Thyroid)	LOEC (143.2 (87.6-172) ug/L)	Endocrine	High	10064183
84-74-2	21 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 9-13 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Growth (Growth-Weight, Response Site: Whole organism)	NOEC (4.76 (2.30-8.15) ug/L)	Development/Growth	High	10064183

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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
84-74-2	21 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 15 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Growth (Morphology-Length, Response Site: Hindlimb)	NOEC (4.76 (2.30-8.15) ug/L)	Development/Growth	High	10064183
84-74-2	21 Day(s), (21 Day(s))	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (FROM IN-HOUSE CULTURE AT FORT ENVIRONMENTAL LABORATORIES, STILLWATER, OKLAHOMA, ORIGINALLY FROM XENOPUS 1, DEXTER, MICHIGAN)	Fresh water, Aqueous (aquatic habitat), Flow-through, 20 Organism	Measured	<0.673-<0.693 ug/L / 4.76 (2.30-8.15) ug/L / 13.4 (7.63-19.6) ug/L / 46.0 (23.8-59.9) ug/L / 143.2 (87.6-172) ug/L	Cellular (Histology-Hypertrophy, Response Site: Thyroid)	NOEC (46.0 (23.8-59.9) ug/L)	Endocrine	High	10064183
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Embryo, Not Reported, Laboratory (EMBRYOS OF ADULTS FROM XENOPUS 1)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 3 mg/L / 5 mg/L / 7.5 mg/L / 10 mg/L / 12.5 mg/L / 15 mg/L / 0 mg/L	Growth (Development-Deformation, Response Site: Not reported)	NOEC (7.5 mg/L)	Development/Growth	Medium	3070743

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Embryo, Not Reported, Laboratory (EMBRYOS OF ADULTS FROM XENOPUS 1)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 3 mg/L / 5 mg/L / 7.5 mg/L / 10 mg/L / 12.5 mg/L / 15 mg/L / 0 mg/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (5 mg/L)	Development/Growth	Medium	3070743
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Embryo, Not Reported, Laboratory (EMBRYOS OF ADULTS FROM XENOPUS 1)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 3 mg/L / 5 mg/L / 7.5 mg/L / 10 mg/L / 12.5 mg/L / 15 mg/L / 0 mg/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (3 mg/L)	Development/Growth	Medium	3070743
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Embryo, Not Reported, Laboratory (EMBRYOS OF ADULTS FROM XENOPUS 1)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 3 mg/L / 5 mg/L / 7.5 mg/L / 10 mg/L / 12.5 mg/L / 15 mg/L / 0 mg/L	Growth (Development-Deformation, Response Site: Not reported)	LOEC (10 mg/L)	Development/Growth	Medium	3070743
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Embryo, Not Reported, Laboratory (EMBRYOS OF ADULTS FROM XENOPUS 1)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 3 mg/L / 5 mg/L / 7.5 mg/L / 10 mg/L / 12.5 mg/L / 15 mg/L / 0 mg/L	Growth (Development-Deformation, Response Site: Not reported)	EC50 (9.70 (8.65-11.02) mg/L)	Development/Growth	Medium	3070743
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Embryo, Not Reported, Laboratory (EMBRYOS OF ADULTS FROM XENOPUS 1)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 3 mg/L / 5 mg/L / 7.5 mg/L / 10 mg/L / 12.5 mg/L / 15 mg/L / 0 mg/L	Growth (Development-Deformation, Response Site: Not reported)	EC50 (9.11 (8.36-10.00) mg/L)	Development/Growth	Medium	3070743

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Embryo, Not Reported, Laboratory (EMBRYOS OF ADULTS FROM XENOPUS 1)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 3 mg/L / 5 mg/L / 7.5 mg/L / 10 mg/L / 12.5 mg/L / 15 mg/L / 0 mg/L	Growth (Development-Deformation, Response Site: Not reported)	EC50 (6.39 (5.88-7.01) mg/L)	Development/Growth	Medium	3070743
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Embryo, Not Reported, Laboratory (EMBRYOS OF ADULTS FROM XENOPUS 1)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 3 mg/L / 5 mg/L / 7.5 mg/L / 10 mg/L / 12.5 mg/L / 15 mg/L / 0 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (12.5 mg/L)	Mortality	Medium	3070743
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Embryo, Not Reported, Laboratory (EMBRYOS OF ADULTS FROM XENOPUS 1)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 3 mg/L / 5 mg/L / 7.5 mg/L / 10 mg/L / 12.5 mg/L / 15 mg/L / 0 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (10 mg/L)	Mortality	Medium	3070743
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Embryo, Not Reported, Laboratory (EMBRYOS OF ADULTS FROM XENOPUS 1)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 3 mg/L / 5 mg/L / 7.5 mg/L / 10 mg/L / 12.5 mg/L / 15 mg/L / 0 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEC (15 mg/L)	Mortality	Medium	3070743
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Embryo, Not Reported, Laboratory (EMBRYOS OF ADULTS FROM XENOPUS 1)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 3 mg/L / 5 mg/L / 7.5 mg/L / 10 mg/L / 12.5 mg/L / 15 mg/L / 0 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEC (14 mg/L)	Mortality	Medium	3070743

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Embryo, Not Reported, Laboratory (EMBRYOS OF ADULTS FROM XENOPUS 1)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 3 mg/L / 5 mg/L / 7.5 mg/L / 10 mg/L / 12.5 mg/L / 15 mg/L / 0 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (14.14 (11.47-18.91) mg/L)	Mortality	Medium	3070743
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Embryo, Not Reported, Laboratory (EMBRYOS OF ADULTS FROM XENOPUS 1)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 3 mg/L / 5 mg/L / 7.5 mg/L / 10 mg/L / 12.5 mg/L / 15 mg/L / 0 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (13.04 (11.70-14.80) mg/L)	Mortality	Medium	3070743
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Embryo, Not Reported, Laboratory (EMBRYOS OF ADULTS FROM XENOPUS 1)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 3 mg/L / 5 mg/L / 7.5 mg/L / 10 mg/L / 12.5 mg/L / 15 mg/L / 0 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (11.44 (10.46-12.68) mg/L)	Mortality	Medium	3070743
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Embryo, Not Reported, Laboratory (EMBRYOS OF ADULTS FROM XENOPUS 1)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 3 mg/L / 5 mg/L / 7.5 mg/L / 10 mg/L / 12.5 mg/L / 15 mg/L / 0 mg/L	Growth (Development-Deformation, Response Site: Not reported)	NOEC (5 mg/L)	Development/Growth	Medium	3070743
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Embryo, Not Reported, Laboratory (EMBRYOS OF ADULTS FROM XENOPUS 1)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 3 mg/L / 5 mg/L / 7.5 mg/L / 10 mg/L / 12.5 mg/L / 15 mg/L / 0 mg/L	Growth (Development-Deformation, Response Site: Not reported)	LOEC (7.5 mg/L)	Development/Growth	Medium	3070743

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 8-11 Nieuwkoop-faber-stage, Not Reported, Laboratory (PROCURED FROM NASCO)	Fresh water, Aqueous (aquatic habitat), Renewal, 300 Embryo	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm / 15.0 ppm	Growth (Development-Deformation, Response Site: Not reported)	EC50 (0.98 ppm)	Development/Growth	High	673293
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 8-11 Nieuwkoop-faber-stage, Not Reported, Laboratory (PROCURED FROM NASCO)	Fresh water, Aqueous (aquatic habitat), Renewal, 300 Embryo	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm / 15.0 ppm	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (14.5 ppm)	Mortality	High	673293
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 8-11 Nieuwkoop-faber-stage, Not Reported, Laboratory (PROCURED FROM NASCO)	Fresh water, Aqueous (aquatic habitat), Renewal, 300 Embryo	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm / 15.0 ppm	Growth (Growth-Length, Response Site: Whole organism)	MCIG (0.1 ppm)	Development/Growth	High	673293
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 8-11 Nieuwkoop-faber-stage, Not Reported, Laboratory (PROCURED FROM NASCO)	Fresh water, Aqueous (aquatic habitat), Renewal, 300 Embryo	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm / 15.0 ppm	Growth (Development-Deformation, Response Site: Not reported)	NOEC (0.1 ppm)	Development/Growth	High	673293

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 8-11 Nieuwkoop-faber-stage, Not Reported, Laboratory (PROCURED FROM NASCO)	Fresh water, Aqueous (aquatic habitat), Renewal, 300 Embryo	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm / 15.0 ppm	Behavior (Behavior-Swimming, Response Site: Not reported)	NR (5.0-15.0 ppm)	Behavioral	Medium	673293
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 8-11 Nieuwkoop-faber-stage, Not Reported, Laboratory (PROCURED FROM NASCO)	Fresh water, Aqueous (aquatic habitat), Renewal, 300 Embryo	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm / 15.0 ppm	Growth (Development-Deformation, Response Site: Not reported)	LOEC (0.5 ppm)	Development/Growth	High	673293
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Reproduction (Reproduction-Spermatocytes, Response Site: Not reported)	NR (0.1-10.0 ppm)	Reproductive/Teratogenic	High	128004
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Growth (Growth-Weight, Response Site: Whole organism)	LOEC (0.1 ppm)	Development/Growth	High	128004

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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
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Cellular (Histology-Histological changes, general, Response Site: Lymphocyte,Oviduct,Seminal vesicle,Testes)	NR (0.1-10.0 ppm)	Reproductive/Teratogenic	High	128004
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Growth (Morphology-Ratio, Response Site: Kidney,Testes,Whole organism)	NOEC (5.0 ppm)	Development/Growth	High	128004
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Reproduction (Reproduction-Spermatocytes, Response Site: Not reported)	NOEC (10.0 ppm)	Reproductive/Teratogenic	High	128004
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Reproduction (Reproduction-Spermatid , Response Site: Not reported)	NOEC (10.0 ppm)	Reproductive/Teratogenic	High	128004

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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
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Growth (Morphology-Ratio, Response Site: Larynx,Whole organism)	NOEC (10.0 ppm)	Development/Growth	High	128004
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Growth (Morphology-Quantity, Response Site: Semeniferous tubules)	NOEC (10.0 ppm)	Development/Growth	High	128004
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Growth (Morphology-Imposex, intersex conditions, Response Site: Oviduct,Testes)	NOEC (10.0 ppm)	Development/Growth	High	128004
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Growth (Morphology-Width, Response Site: Testes)	NOEC (1.0 ppm)	Development/Growth	High	128004

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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
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Reproduction (Reproduction-Spermatigonia, Response Site: Not reported)	NOEC (0.5 ppm)	Reproductive/Teratogenic	High	128004
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (0.1-10.0 ppm)	Mortality	High	128004
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Growth (Morphology-Width, Response Site: Testes)	LOEC (5.0 ppm)	Development/Growth	High	128004
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Growth (Morphology-Ratio, Response Site: Kidney,Testes,Whole organism)	LOEC (10.0 ppm)	Development/Growth	High	128004

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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
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Reproduction (Reproduction-Spermatigonia, Response Site: Not reported)	LOEC (1.0 ppm)	Reproductive/Teratogenic	High	128004
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Growth (Morphology-Weight, Response Site: Larynx)	LOEC (1.0 ppm)	Development/Growth	High	128004
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Reproduction (Reproduction-Germ cell count, Response Site: Semeniferous tubules)	LOEC (0.1 ppm)	Reproductive/Teratogenic	High	128004
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Growth (Morphology-Weight, Response Site: Kidney,Testes)	LOEC (0.1 ppm)	Development/Growth	High	128004

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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
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Growth (Morphology-Seminiferous tubule diameter, Response Site: Semeniferous tubules)	LOEC (0.1 ppm)	Development/Growth	High	128004
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Growth (Morphology-Quantity, Response Site: Semeniferous tubules)	LOEC (0.1 ppm)	Development/Growth	High	128004
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Growth (Morphology-Length, Response Site: Testes)	LOEC (0.1 ppm)	Development/Growth	High	128004
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEC (10.0 ppm)	Mechanistic: Endocrine toxicity	High	128004

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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
84-74-2	30 Week(s), (30 Week(s))	*Xenopus laevis* (African Clawed Frog), Embryo, 3 Week(s), Not Reported, Laboratory (PARENTS FROM NASCO, FORT ATKINSON, WI)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 ppm / 0 ppm / 0.1 ppm / 0.5 ppm / 1.0 ppm / 5.0 ppm / 10.0 ppm	Growth (Morphology-Weight, Response Site: Larynx)	NOEC (0.5 ppm)	Development/Growth	High	128004
84-74-2	57 Stage, (57 Stage)	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (NASCO, USA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 10 mg/L / 15 mg/L	Cellular (Genetics-Retinoid X Receptor gamma mRNA, Response Site: Head)	LOEC (10 mg/L)	Mechanistic: Cell signaling/function; Epigenetics; Endocrine toxicity	High	787926
84-74-2	57 Stage, (57 Stage)	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (NASCO, USA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 10 mg/L / 15 mg/L	Cellular (Genetics-Thyroid Hormone Receptor beta mRNA, Response Site: Head)	LOEC (2 mg/L)	Mechanistic: Cell signaling/function; Epigenetics; Endocrine toxicity	High	787926
84-74-2	57 Stage, (57 Stage)	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (NASCO, USA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 10 mg/L / 15 mg/L	Cellular (Genetics-Retinoid X Receptor gamma mRNA, Response Site: Head)	NOEC (2 mg/L)	Mechanistic: Cell signaling/function; Epigenetics; Endocrine toxicity	High	787926
84-74-2	57 Stage, (57 Stage)	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (NASCO, USA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 10 mg/L / 15 mg/L	Cellular (Genetics-Thyroid Stimulating Hormone beta mRNA, Response Site: Head)	NOEC (2 mg/L)	Mechanistic: Cell signaling/function; Epigenetics; Endocrine toxicity	High	787926

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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
84-74-2	57 Stage, (57 Stage)	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (NASCO, USA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 10 mg/L / 15 mg/L	Cellular (Genetics-Thyroid Stimulating Hormone alpha mRNA, Response Site: Head)	NR (2-15 mg/L)	Mechanistic: Cell signaling/function; Epigenetics; Endocrine toxicity	High	787926
84-74-2	57 Stage, (57 Stage)	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (NASCO, USA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 10 mg/L / 15 mg/L	Cellular (Genetics-Thyroid Stimulating Hormone beta mRNA, Response Site: Head)	LOEC (10 mg/L)	Mechanistic: Cell signaling/function; Epigenetics; Endocrine toxicity	High	787926
84-74-2	22 Day(s), (57 Stage)	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (NASCO, USA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 10 mg/L / 15 mg/L	Growth (Morphology-General morphological changes, Response Site: Not reported)	LOEC (15 mg/L)	Development/Growth	High	787926
84-74-2	22 Day(s), (57 Stage)	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (NASCO, USA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 10 mg/L / 15 mg/L	Cellular (Genetics-Thyroid Hormone Receptor beta mRNA, Response Site: Head)	LOEC (2 mg/L)	Mechanistic: Cell signaling/function; Epigenetics; Endocrine toxicity	High	787926
84-74-2	22 Day(s), (57 Stage)	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (NASCO, USA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 10 mg/L / 15 mg/L	Growth (Growth-Length, Response Site: Whole organism)	NOEC (10 mg/L)	Development/Growth	High	787926

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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
84-74-2	22 Day(s), (57 Stage)	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (NASCO, USA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 10 mg/L / 15 mg/L	Growth (Morphology-General morphological changes, Response Site: Not reported)	NOEC (10 mg/L)	Development/Growth	High	787926
84-74-2	22 Day(s), (57 Stage)	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (NASCO, USA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 10 mg/L / 15 mg/L	Cellular (Genetics-DNA methylation, Response Site: Head)	NOEC (15 mg/L)	Mechanistic: Cell signaling/function; Epigenetics; Endocrine toxicity	High	787926
84-74-2	22 Day(s), (57 Stage)	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (NASCO, USA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 10 mg/L / 15 mg/L	Cellular (Genetics-Thyroid Stimulating Hormone alpha mRNA, Response Site: Head)	NR (2-15 mg/L)	Mechanistic: Cell signaling/function; Epigenetics; Endocrine toxicity	High	787926
84-74-2	22 Day(s), (57 Stage)	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (NASCO, USA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 10 mg/L / 15 mg/L	Cellular (Genetics-Retinoid X Receptor gamma mRNA, Response Site: Head)	LOEC (10 mg/L)	Mechanistic: Cell signaling/function; Epigenetics; Endocrine toxicity	High	787926
84-74-2	22 Day(s), (57 Stage)	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (NASCO, USA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 10 mg/L / 15 mg/L	Growth (Morphology-Ratio, Response Site: Not reported)	NOEC (15 mg/L)	Development/Growth	High	787926

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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
84-74-2	22 Day(s), (57 Stage)	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (NASCO, USA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 10 mg/L / 15 mg/L	Growth (Development-Stage, Response Site: Not reported)	LOEC (10 mg/L)	Development/Growth	High	787926
84-74-2	22 Day(s), (57 Stage)	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (NASCO, USA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 10 mg/L / 15 mg/L	Cellular (Genetics-Retinoid X Receptor gamma mRNA, Response Site: Head)	NOEC (2 mg/L)	Mechanistic: Cell signaling/function; Epigenetics; Endocrine toxicity	High	787926
84-74-2	22 Day(s), (57 Stage)	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (NASCO, USA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 10 mg/L / 15 mg/L	Growth (Development-Stage, Response Site: Not reported)	NOEC (2 mg/L)	Development/Growth	High	787926
84-74-2	22 Day(s), (57 Stage)	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (NASCO, USA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 10 mg/L / 15 mg/L	Cellular (Genetics-Thyroid Stimulating Hormone beta mRNA, Response Site: Head)	NR (2-15 mg/L)	Mechanistic: Cell signaling/function; Epigenetics; Endocrine toxicity	High	787926
84-74-2	22 Day(s), (57 Stage)	*Xenopus laevis* (African Clawed Frog), Tadpole, 51 Nieuwkoop-faber-stage, Not Reported, Laboratory (NASCO, USA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 2 mg/L / 10 mg/L / 15 mg/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (15 mg/L)	Development/Growth	High	787926

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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
84-74-2	24 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, 40 Organism	Unmeasured	0 mg/L / 6.3 mg/L / 9.4 mg/L / 14.1 mg/L / 21.0 mg/L / 31.5 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (31.5 mg/L)	Mortality	High	4829262
84-74-2	48 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, 40 Organism	Unmeasured	0 mg/L / 6.3 mg/L / 9.4 mg/L / 14.1 mg/L / 21.0 mg/L / 31.5 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (14.1 mg/L)	Mortality	High	4829262
84-74-2	48 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, 40 Organism	Unmeasured	0 mg/L / 6.3 mg/L / 9.4 mg/L / 14.1 mg/L / 21.0 mg/L / 31.5 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (21.0 mg/L)	Mortality	High	4829262
84-74-2	72 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, 40 Organism	Unmeasured	0 mg/L / 6.3 mg/L / 9.4 mg/L / 14.1 mg/L / 21.0 mg/L / 31.5 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (14.1 mg/L)	Mortality	High	4829262

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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
84-74-2	72 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, 40 Organism	Unmeasured	0 mg/L / 6.3 mg/L / 9.4 mg/L / 14.1 mg/L / 21.0 mg/L / 31.5 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (21.0 mg/L)	Mortality	High	4829262
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 1.1 mg/L / 10.5 mg/L	Cellular (Genetics-Collagen alpha-1(II) chain mRNA, Response Site: Not reported)	LOEC (10.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair); Oxidative stress (including redox biology)	High	4829262
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, 40 Organism	Unmeasured	0 mg/L / 6.3 mg/L / 9.4 mg/L / 14.1 mg/L / 21.0 mg/L / 31.5 mg/L	Growth (Morphology-Abnormal, Response Site: Tail)	NOEC (14.1 mg/L)	Development/Growth	High	4829262
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 1.1 mg/L / 10.5 mg/L	Cellular (Genetics-Forkhead box N3 S homeolog mRNA, Response Site: Not reported)	LOEC (10.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair); Oxidative stress (including redox biology)	High	4829262

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 1.1 mg/L / 10.5 mg/L	Cellular (Genetics-Collagen alpha-1(II) chain mRNA, Response Site: Not reported)	NOEC (1.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair); Oxidative stress (including redox biology)	High	4829262
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 1.1 mg/L / 10.5 mg/L	Biochemical (Biochemistry-Lipid hydroperoxide, Response Site: Head)	NOEC (1.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair); Oxidative stress (including redox biology)	High	4829262
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, 40 Organism	Unmeasured	0 mg/L / 6.3 mg/L / 9.4 mg/L / 14.1 mg/L / 21.0 mg/L / 31.5 mg/L	Growth (Morphology-Abnormal, Response Site: Gut)	LOEC (6.3 mg/L)	Development/Growth	High	4829262
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, 40 Organism	Unmeasured	0 mg/L / 6.3 mg/L / 9.4 mg/L / 14.1 mg/L / 21.0 mg/L / 31.5 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (13.3 mg/L)	Mortality	High	4829262

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, 40 Organism	Unmeasured	0 mg/L / 6.3 mg/L / 9.4 mg/L / 14.1 mg/L / 21.0 mg/L / 31.5 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	LOEC (21.0 mg/L)	Mortality	High	4829262
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, 40 Organism	Unmeasured	0 mg/L / 6.3 mg/L / 9.4 mg/L / 14.1 mg/L / 21.0 mg/L / 31.5 mg/L	Growth (Morphology-Abnormal, Response Site: Not reported)	EC50 (7.5 mg/L)	Development/Growth	High	4829262
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, 40 Organism	Unmeasured	0 mg/L / 6.3 mg/L / 9.4 mg/L / 14.1 mg/L / 21.0 mg/L / 31.5 mg/L	Growth (Morphology-Length, Response Site: Tail)	LOEC (6.3 mg/L)	Development/Growth	High	4829262
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, 40 Organism	Unmeasured	0 mg/L / 6.3 mg/L / 9.4 mg/L / 14.1 mg/L / 21.0 mg/L / 31.5 mg/L	Growth (Morphology-Abnormal, Response Site: Head)	LOEC (9.4 mg/L)	Development/Growth	High	4829262

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, 40 Organism	Unmeasured	0 mg/L / 6.3 mg/L / 9.4 mg/L / 14.1 mg/L / 21.0 mg/L / 31.5 mg/L	Growth (Morphology-Abnormal, Response Site: Not reported)	LOEC (6.3 mg/L)	Development/Growth	High	4829262
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 1.1 mg/L / 10.5 mg/L	Biochemical (Biochemistry-Lipid hydroperoxide, Response Site: Head)	LOEC (10.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair); Oxidative stress (including redox biology)	High	4829262
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 1.1 mg/L / 10.5 mg/L	Cellular (Genetics-bax mRNA, Response Site: Not reported)	NR (0.1-10.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair); Oxidative stress (including redox biology)	High	4829262
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 1.1 mg/L / 10.5 mg/L	Cellular (Genetics-BCL2 antagonist/killer 1 S homeolog mRNA, Response Site: Not reported)	NR (0.1-10.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair); Oxidative stress (including redox biology)	High	4829262

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 1.1 mg/L / 10.5 mg/L	Cellular (Genetics-BCL2 associated agonist of cell death mRNA, Response Site: Not reported)	NOEC (10.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair); Oxidative stress (including redox biology)	High	4829262
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 1.1 mg/L / 10.5 mg/L	Cellular (Genetics-Forkhead box N3 S homeolog mRNA, Response Site: Not reported)	NOEC (1.1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair); Oxidative stress (including redox biology)	High	4829262
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, 40 Organism	Unmeasured	0 mg/L / 6.3 mg/L / 9.4 mg/L / 14.1 mg/L / 21.0 mg/L / 31.5 mg/L	Cellular (Histology-Lesions, Response Site: Not reported)	LOEC (9.4 mg/L)	Development/Growth	High	4829262
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, 40 Organism	Unmeasured	0 mg/L / 6.3 mg/L / 9.4 mg/L / 14.1 mg/L / 21.0 mg/L / 31.5 mg/L	Mortality (Mortality-Survival, Response Site: Not reported)	NOEC (14.1 mg/L)	Mortality	High	4829262

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, 40 Organism	Unmeasured	0 mg/L / 6.3 mg/L / 9.4 mg/L / 14.1 mg/L / 21.0 mg/L / 31.5 mg/L	Cellular (Histology-Lesions, Response Site: Not reported)	NOEC (6.3 mg/L)	Development/Growth	High	4829262
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, 40 Organism	Unmeasured	0 mg/L / 6.3 mg/L / 9.4 mg/L / 14.1 mg/L / 21.0 mg/L / 31.5 mg/L	Growth (Morphology-Abnormal, Response Site: Head)	NOEC (6.3 mg/L)	Development/Growth	High	4829262
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, 40 Organism	Unmeasured	0 mg/L / 6.3 mg/L / 9.4 mg/L / 14.1 mg/L / 21.0 mg/L / 31.5 mg/L	Growth (Morphology-Length, Response Site: Head)	NOEC (14.1 mg/L)	Development/Growth	High	4829262
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, 40 Organism	Unmeasured	0 mg/L / 6.3 mg/L / 9.4 mg/L / 14.1 mg/L / 21.0 mg/L / 31.5 mg/L	Growth (Morphology-Abnormal, Response Site: Whole organism)	NOEC (14.1 mg/L)	Development/Growth	High	4829262

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, 40 Organism	Unmeasured	0 mg/L / 6.3 mg/L / 9.4 mg/L / 14.1 mg/L / 21.0 mg/L / 31.5 mg/L	Growth (Morphology-Abnormal, Response Site: Trunk)	NOEC (14.1 mg/L)	Development/Growth	High	4829262
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 1.1 mg/L / 10.5 mg/L	Cellular (Genetics-B-cell lymphoma/leukemia 2-gene mRNA, Response Site: Not reported)	NR (0.1-10.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair); Oxidative stress (including redox biology)	High	4829262
84-74-2	96 Hour(s), (96 Hour(s))	*Xenopus laevis* (African Clawed Frog), Blastula, >2 Hours post fertilization, Not Reported, Laboratory (BRED AT HANYANG UNIVERSITY AQUARIUM)	Culture, Aqueous (aquatic habitat), Renewal, 40 Organism	Unmeasured	0 mg/L / 6.3 mg/L / 9.4 mg/L / 14.1 mg/L / 21.0 mg/L / 31.5 mg/L	Growth (Growth-Length, Response Site: Whole organism)	LOEC (6.3 mg/L)	Development/Growth	High	4829262

* 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
84-74-2	14 Day(s), (14 Day(s))	*Annelida* (Segmented Worm Phylum), Not reported, Not Reported, Wild (COLONIZED FROM FIELD AQUARIA IN SANTA ROSA SOUND, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.036 mg/L / 0.45 mg/L / 3.8 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (3.8 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Annelida* (Segmented Worm Phylum), Not reported, Not Reported, Wild (COLONIZED FROM FIELD AQUARIA IN SANTA ROSA SOUND, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.036 mg/L / 0.45 mg/L / 3.8 mg/L	Population (Population-Diversity, Evenness, Response Site: Not reported)	NOEC (3.8 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Annelida* (Segmented Worm Phylum), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (3.7 mg/L)	Development/Growth	Medium	5495608

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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
84-74-2	14 Day(s), (14 Day(s))	*Annelida* (Segmented Worm Phylum), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Diversity, Evenness, Response Site: Not reported)	LOEC (3.7 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Annelida* (Segmented Worm Phylum), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (0.34 mg/L)	Development/Growth	Medium	5495608

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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
84-74-2	14 Day(s), (14 Day(s))	*Annelida* (Segmented Worm Phylum), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Diversity, Evenness, Response Site: Not reported)	NOEC (0.34 mg/L)	Development/Growth	Medium	5495608
84-74-2	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	<0.05 mg/L / 0.24 mg/L / 0.46 mg/L / 1.27 mg/L / 2.72 mg/L / 5.38 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (2.48 (2.12-2.91) mg/L)	Mortality	High	679312
84-74-2	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	<0.05 mg/L / 0.24 mg/L / 0.46 mg/L / 1.27 mg/L / 2.72 mg/L / 5.38 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-LETH (5.38 mg/L)	Mortality	High	679312

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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
84-74-2	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	<0.05 mg/L / 0.24 mg/L / 0.46 mg/L / 1.27 mg/L / 2.72 mg/L / 5.38 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (1.27 mg/L)	Mortality	High	679312
84-74-2	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), Flow-through, Not Reported	Measured	<0.05 mg/L / 0.24 (0.06-0.43) mg/L / 0.46 (0.27-0.60) mg/L / 1.27 (0.90-1.55) mg/L / 2.72 (2.23-2.98) mg/L / 5.38 (4.96-5.86) mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (2.48 (2.00-3.72) mg/L)	Mortality	High	7325945
84-74-2	14 Day(s), (14 Day(s))	*Nemertea* (Proboscis Worm Phylum), Not reported, Not Reported, Wild (COLONIZED FROM FIELD AQUARIA IN SANTA ROSA SOUND, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.036 mg/L / 0.45 mg/L / 3.8 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (3.8 mg/L)	Development/Growth	Medium	5495608

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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
84-74-2	14 Day(s), (14 Day(s))	*Nemertea* (Proboscis Worm Phylum), Not reported, Not Reported, Wild (COLONIZED FROM FIELD AQUARIA IN SANTA ROSA SOUND, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.036 mg/L / 0.45 mg/L / 3.8 mg/L	Population (Population-Diversity, Evenness, Response Site: Not reported)	NOEC (3.8 mg/L)	Development/Growth	Medium	5495608

* 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
84-74-2	48-144 Hour(s), (144 Hour(s))	*Algae* (Algae), Not reported, Not Reported, Wild (EAST LAKE, WUHAN, CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 10 mg/L / 20 mg/L / 40 mg/L / 60 mg/L	Population (Population-Abundance, Response Site: Not reported)	NR (10-60 mg/L)	Development/Growth	Low	1332820
84-74-2	40 Minute(s), (40 Minute(s))	*Chlorella emersonii* (Green Algae), Not reported, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 M / 0.001 M / 0.0001 M / 0.00001 M / 0.000001 M	Physiology (Physiology-Photosynthesis, Response Site: Not reported)	IC50 (0.0003 M)	Mechanistic: Photosynthesis	Uninformative	1333016
84-74-2	0.5-7 Day(s), (7 Day(s))	*Chlorella emersonii* (Green Algae), Not reported, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 M / 0.001 M / 0.0001 M / 0.00001 M / 0.000001 M	Population (Population-Biomass, Response Site: Not reported)	NR (0.0001-0.001 M)	Development/Growth	Uninformative	1333016
84-74-2	96 Hour(s), (96 Hour(s))	*Chlorella pyrenoidosa* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	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)	EC50 (3.14 mg/L)	Development/Growth	High	5433509

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Chlorella pyrenoidosa* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	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 (2 mg/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5433509
84-74-2	96 Hour(s), (96 Hour(s))	*Chlorella pyrenoidosa* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	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-Reactive oxygen species, Response Site: Not reported)	LOEC (2 mg/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5433509

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Chlorella pyrenoidosa* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	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	High	5433509
84-74-2	96 Hour(s), (96 Hour(s))	*Chlorella pyrenoidosa* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	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)-Catalase, Response Site: Not reported)	LOEC (6 mg/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5433509

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Chlorella pyrenoidosa* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	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)-Catalase, Response Site: Not reported)	NOEC (4 mg/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5433509
84-74-2	96 Hour(s), (96 Hour(s))	*Chlorella pyrenoidosa* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	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-Chlorophyll A concentration, Response Site: Not reported)	NR (2-10 mg/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5433509

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Chlorella pyrenoidosa* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	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-Chlorophyll B concentration, Response Site: Not reported)	NR (2-10 mg/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5433509
84-74-2	96 Hour(s), (96 Hour(s))	*Chlorella pyrenoidosa* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	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	Cellular (Histology-Disorganization,Vacuolization, Response Site: Not reported)	NR (8 mg/L)	Development/Growth	High	5433509

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Chlorella pyrenoidosa* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	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)	NR (2-10 mg/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5433509
84-74-2	0.5 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	0.5 mg/L	Accumulation (Accumulation-Residue, Response Site: Not reported)	NR (0.5 mg/L)	ADME (biotransformation)	Uninformative	679344

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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
84-74-2	1-<8 Day(s), (<8 Day(s))	*Dunaliella parva* (Green Algae), Not reported, Not Reported, Laboratory (SUPPLIED FROM STOCK CULTURES MAINTAINED BY THE MARINE BIOLOGY LABORATORY AT CALIFORNIA STATE UNIVERSITY LONG BEACH OR WERE OBTAINED FROM THE CAROLINIA BIOLOGICAL SUPPLY CO. (BURLINGTON, NC).)	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Not reported	0 uM / 1 uM / 10 uM	Population (Population-Population growth rate, Response Site: Not reported)	NR (10-100 uM)	Development/Growth	Uninformative	790153
84-74-2	24 Hour(s), (24 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 mg/L / 0 mg/L / 20 mg/L	Biochemical (Biochemistry-Reactive oxygen species, Response Site: Not reported)	LOEC (20 mg/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	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
84-74-2	24 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 / 10 ml/L / 30 ml/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Not reported)	LOEC (10 ml/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Low	3230225
84-74-2	48 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 / 10 ml/L / 30 ml/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Not reported)	LOEC (10 ml/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Low	3230225
84-74-2	72 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 / 10 ml/L / 30 ml/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Not reported)	LOEC (10 ml/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	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
84-74-2	24-72 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 / 10 ml/L / 30 ml/L	Biochemical (Biochemistry-Hydrogen peroxide,Hydroxide content,Superoxide, Response Site: Not reported)	NR (10-30 ml/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Low	3230225
84-74-2	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
84-74-2	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 / 10 ml/L / 30 ml/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Not reported)	LOEC (10 ml/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	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
84-74-2	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 / 10 ml/L / 30 ml/L	Biochemical (Enzyme(s)-Catalase,Superoxide dismutase (SOD) enzyme activity, Response Site: Not reported)	NR (10-30 ml/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Low	3230225
84-74-2	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 (1.49 (1.08-2.06) mg/L)	Development/Growth	Uninformative	789536
84-74-2	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 (2.52 (2.10-3.12) mg/L)	Development/Growth	Uninformative	789536
84-74-2	24 Hour(s), (96 Hour(s))	*Scenedesmus acutus var. acutus* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 4 mg/L / 8 mg/L / 12 mg/L / 16 mg/L / 20 mg/L	Biochemical (Biochemistry-Chlorophyll B concentration, Response Site: Not reported)	NOEC (20 mg/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5433509

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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
84-74-2	24 Hour(s), (96 Hour(s))	*Scenedesmus acutus var. acutus* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 4 mg/L / 8 mg/L / 12 mg/L / 16 mg/L / 20 mg/L	Biochemical (Biochemistry-Chlorophyll A concentration, Response Site: Not reported)	NOEC (20 mg/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5433509
84-74-2	24 Hour(s), (96 Hour(s))	*Scenedesmus acutus var. acutus* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 4 mg/L / 8 mg/L / 12 mg/L / 16 mg/L / 20 mg/L	Biochemical (Biochemistry-Carotenoid content, Response Site: Not reported)	NOEC (20 mg/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5433509

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Scenedesmus acutus var. acutus* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 4 mg/L / 8 mg/L / 12 mg/L / 16 mg/L / 20 mg/L	Biochemical (Biochemistry-Chlorophyll A concentration, Response Site: Not reported)	NR (4-20 mg/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5433509
84-74-2	96 Hour(s), (96 Hour(s))	*Scenedesmus acutus var. acutus* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 4 mg/L / 8 mg/L / 12 mg/L / 16 mg/L / 20 mg/L	Cellular (Histology-Disorganization,Vacuolization, Response Site: Not reported)	NR (8 mg/L)	Development/Growth	High	5433509

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Scenedesmus acutus var. acutus* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 4 mg/L / 8 mg/L / 12 mg/L / 16 mg/L / 20 mg/L	Biochemical (Biochemistry-Chlorophyll B concentration, Response Site: Not reported)	NR (4-20 mg/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5433509
84-74-2	96 Hour(s), (96 Hour(s))	*Scenedesmus acutus var. acutus* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 4 mg/L / 8 mg/L / 12 mg/L / 16 mg/L / 20 mg/L	Biochemical (Biochemistry-Carotenoid content, Response Site: Not reported)	NR (4-20 mg/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5433509

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Scenedesmus acutus var. acutus* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 4 mg/L / 8 mg/L / 12 mg/L / 16 mg/L / 20 mg/L	Biochemical (Biochemistry-Reactive oxygen species, Response Site: Not reported)	NOEC (8 mg/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5433509
84-74-2	96 Hour(s), (96 Hour(s))	*Scenedesmus acutus var. acutus* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 4 mg/L / 8 mg/L / 12 mg/L / 16 mg/L / 20 mg/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (4 mg/L)	Development/Growth	High	5433509

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Scenedesmus acutus var. acutus* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 4 mg/L / 8 mg/L / 12 mg/L / 16 mg/L / 20 mg/L	Biochemical (Biochemistry-Reactive oxygen species, Response Site: Not reported)	LOEC (12 mg/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5433509
84-74-2	96 Hour(s), (96 Hour(s))	*Scenedesmus acutus var. acutus* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 4 mg/L / 8 mg/L / 12 mg/L / 16 mg/L / 20 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Not reported)	LOEC (12 mg/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5433509

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Scenedesmus acutus var. acutus* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 4 mg/L / 8 mg/L / 12 mg/L / 16 mg/L / 20 mg/L	Population (Population-Abundance, Response Site: Not reported)	EC50 (15.3 mg/L)	Development/Growth	High	5433509
84-74-2	96 Hour(s), (96 Hour(s))	*Scenedesmus acutus var. acutus* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 4 mg/L / 8 mg/L / 12 mg/L / 16 mg/L / 20 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Not reported)	NOEC (20 mg/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5433509

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Scenedesmus acutus var. acutus* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 4 mg/L / 8 mg/L / 12 mg/L / 16 mg/L / 20 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Not reported)	NOEC (4 mg/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5433509
84-74-2	96 Hour(s), (96 Hour(s))	*Scenedesmus acutus var. acutus* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 4 mg/L / 8 mg/L / 12 mg/L / 16 mg/L / 20 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Not reported)	NOEC (8 mg/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5433509

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Scenedesmus acutus var. acutus* (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (FRESHWATER ALGAE CULTURE COLLECTION AT THE INSTITUTE OF HYDROBIOLOGY AT THE CHINESE ACADEMY OF SCIENCES)	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 mg/L / 4 mg/L / 8 mg/L / 12 mg/L / 16 mg/L / 20 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Not reported)	LOEC (8 mg/L)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5433509
84-74-2	96 Hour(s), (96 Hour(s))	*Scenedesmus acutus var. acutus* (Green Algae), Not reported, Not Reported, Laboratory (INSTITUTE OF HYDROBIOLOGY (ACADEMIA SINICA, CHINA))	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 10 mg/L / 20 mg/L / 40 mg/L / 60 mg/L / 80 mg/L	Population (Population-Abundance, Response Site: Not reported)	EC50 (30.2 mg/L)	Development/Growth	Medium	1332820
84-74-2	96 Hour(s), (96 Hour(s))	*Scenedesmus acutus var. acutus* (Green Algae), Not reported, Not Reported, Laboratory (INSTITUTE OF HYDROBIOLOGY (ACADEMIA SINICA, CHINA))	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 10 mg/L / 20 mg/L / 40 mg/L / 60 mg/L / 80 mg/L	Population (Population-Chlorophyll A concentration, Response Site: Not reported)	EC50 (44.7 mg/L)	Development/Growth	Medium	1332820

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Scenedesmus acutus var. acutus* (Green Algae), Not reported, Not Reported, Laboratory (INSTITUTE OF HYDROBIOLOGY (ACADEMIA SINICA, CHINA))	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 10 mg/L / 20 mg/L / 40 mg/L / 60 mg/L / 80 mg/L	Population (Population-Population growth rate, Response Site: Not reported)	EC50 (39.8 mg/L)	Development/Growth	Medium	1332820
84-74-2	4 Week(s), (4 Week(s))	*Scenedesmus acutus var. acutus* (Green Algae), Not reported, Not Reported, Laboratory (INSTITUTE OF HYDROBIOLOGY (ACADEMIA SINICA, CHINA))	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 10 mg/L / 20 mg/L / 40 mg/L / 60 mg/L / 80 mg/L	Cellular (Cell(s)-Cell changes, Response Site: Not reported)	NR (10-80 mg/L)	Mechanistic: Cell signaling/function	Medium	1332820
84-74-2	4 Week(s), (4 Week(s))	*Scenedesmus acutus var. acutus* (Green Algae), Not reported, Not Reported, Laboratory (INSTITUTE OF HYDROBIOLOGY (ACADEMIA SINICA, CHINA))	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 10 mg/L / 20 mg/L / 40 mg/L / 60 mg/L / 80 mg/L	Population (Population-Population growth rate, Response Site: Not reported)	NR (10-80 mg/L)	Development/Growth	Medium	1332820
84-74-2	24 Hour(s), (96 Hour(s))	*Selenastrum capricornutum* (Green Algae), Not reported, Not Reported, Laboratory (GLOBAL ENVIRONMENTAL FORUM, TSUKUBA, JAPAN)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (1 mg/L)	Development/Growth	Medium	1323217

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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
84-74-2	24 Hour(s), (96 Hour(s))	*Selenastrum capricornutum* (Green Algae), Not reported, Not Reported, Laboratory (GLOBAL ENVIRONMENTAL FORUM, TSUKUBA, JAPAN)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (10 mg/L)	Development/Growth	Medium	1323217
84-74-2	24 Hour(s), (96 Hour(s))	*Selenastrum capricornutum* (Green Algae), Not reported, Not Reported, Laboratory (GLOBAL ENVIRONMENTAL FORUM, TSUKUBA, JAPAN)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 10 mg/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (10 mg/L)	Development/Growth	Medium	1323217
84-74-2	24 Hour(s), (96 Hour(s))	*Selenastrum capricornutum* (Green Algae), Not reported, Not Reported, Laboratory (GLOBAL ENVIRONMENTAL FORUM, TSUKUBA, JAPAN)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 10 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (10 mg/L)	Development/Growth	Medium	1323217
84-74-2	48 Hour(s), (96 Hour(s))	*Selenastrum capricornutum* (Green Algae), Not reported, Not Reported, Laboratory (GLOBAL ENVIRONMENTAL FORUM, TSUKUBA, JAPAN)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (0.1 mg/L)	Development/Growth	Medium	1323217

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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
84-74-2	48 Hour(s), (96 Hour(s))	*Selenastrum capricornutum* (Green Algae), Not reported, Not Reported, Laboratory (GLOBAL ENVIRONMENTAL FORUM, TSUKUBA, JAPAN)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 10 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (10 mg/L)	Development/Growth	Medium	1323217
84-74-2	48 Hour(s), (96 Hour(s))	*Selenastrum capricornutum* (Green Algae), Not reported, Not Reported, Laboratory (GLOBAL ENVIRONMENTAL FORUM, TSUKUBA, JAPAN)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 10 mg/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (10 mg/L)	Development/Growth	Medium	1323217
84-74-2	48 Hour(s), (96 Hour(s))	*Selenastrum capricornutum* (Green Algae), Not reported, Not Reported, Laboratory (GLOBAL ENVIRONMENTAL FORUM, TSUKUBA, JAPAN)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (1 mg/L)	Development/Growth	Medium	1323217
84-74-2	72 Hour(s), (96 Hour(s))	*Selenastrum capricornutum* (Green Algae), Not reported, Not Reported, Laboratory (GLOBAL ENVIRONMENTAL FORUM, TSUKUBA, JAPAN)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (0.1 mg/L)	Development/Growth	Medium	1323217

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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
84-74-2	72 Hour(s), (96 Hour(s))	*Selenastrum capricornutum* (Green Algae), Not reported, Not Reported, Laboratory (GLOBAL ENVIRONMENTAL FORUM, TSUKUBA, JAPAN)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (1 mg/L)	Development/Growth	Medium	1323217
84-74-2	72 Hour(s), (96 Hour(s))	*Selenastrum capricornutum* (Green Algae), Not reported, Not Reported, Laboratory (GLOBAL ENVIRONMENTAL FORUM, TSUKUBA, JAPAN)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 10 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (10 mg/L)	Development/Growth	Medium	1323217
84-74-2	72 Hour(s), (96 Hour(s))	*Selenastrum capricornutum* (Green Algae), Not reported, Not Reported, Laboratory (GLOBAL ENVIRONMENTAL FORUM, TSUKUBA, JAPAN)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 10 mg/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (10 mg/L)	Development/Growth	Medium	1323217
84-74-2	96 Hour(s), (96 Hour(s))	*Selenastrum capricornutum* (Green Algae), Not reported, Not Reported, Laboratory (GLOBAL ENVIRONMENTAL FORUM, TSUKUBA, JAPAN)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (1 mg/L)	Development/Growth	Medium	1323217

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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
84-74-2	96 Hour(s), (96 Hour(s))	*Selenastrum capricornutum* (Green Algae), Not reported, Not Reported, Laboratory (GLOBAL ENVIRONMENTAL FORUM, TSUKUBA, JAPAN)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.1 mg/L / 1 mg/L / 10 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (0.1 mg/L)	Development/Growth	Medium	1323217
84-74-2	96 Hour(s), (96 Hour(s))	*Selenastrum capricornutum* (Green Algae), Not reported, Not Reported, Laboratory (GLOBAL ENVIRONMENTAL FORUM, TSUKUBA, JAPAN)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 10 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (10 mg/L)	Development/Growth	Medium	1323217
84-74-2	96 Hour(s), (96 Hour(s))	*Selenastrum capricornutum* (Green Algae), Not reported, Not Reported, Laboratory (GLOBAL ENVIRONMENTAL FORUM, TSUKUBA, JAPAN)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 10 mg/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (10 mg/L)	Development/Growth	Medium	1323217
84-74-2	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)	NOEC (0.21 mg/L)	Development/Growth	High	1321996
84-74-2	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 (0.40 mg/L)	Development/Growth	High	1321996

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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
84-74-2	10 Day(s), (10 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	0.02-0.09 mg/L / 0.0-0.05 mg/L / 0.02-0.08 mg/L / 0.05-0.13 mg/L / 0.03-0.39 mg/L / 0.09-0.77 mg/L / 0.24-1.45 mg/L	Population (Population-Chlorophyll, Response Site: Not reported)	EC50 (0.75 (0.58-0.99) mg/L)	Development/Growth	High	1316196
84-74-2	0.5-7 Day(s), (7 Day(s))	*Selenastrum capricornutum* (Green Algae), Not reported, Not Reported, Laboratory	Culture, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 M / 0.001 M / 0.0001 M / 0.00001 M / 0.000001 M	Population (Population-Biomass, Response Site: Not reported)	NR (0.0001-0.001 M)	Development/Growth	Medium	1333016
84-74-2	4 Day(s), (4 Day(s))	*Skeletonema costatum* (Diatom), Exponential growth phase (log), Not Reported, Laboratory	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 ug/ul / 0.0015 ug/ul / 0.0075 ug/ul / 0.015 ug/ul / 0.075 ug/ul / 0.15 ug/ul / 0.3 ug/ul / 0.75 ug/ul	Population (Population-Population growth rate, Response Site: Not reported)	NOEC (0.3 ug/ul)	Development/Growth	Medium	789981
84-74-2	4 Day(s), (4 Day(s))	*Skeletonema costatum* (Diatom), Exponential growth phase (log), Not Reported, Laboratory	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 ug/ul / 0.0015 ug/ul / 0.0075 ug/ul / 0.015 ug/ul / 0.075 ug/ul / 0.15 ug/ul / 0.3 ug/ul / 0.75 ug/ul	Population (Population-Population growth rate, Response Site: Not reported)	LOEC (0.75 ug/ul)	Development/Growth	Medium	789981
84-74-2	4 Day(s), (4 Day(s))	*Skeletonema costatum* (Diatom), Exponential growth phase (log), Not Reported, Laboratory	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 ug/ul / 0.0014 ug/ul / 0.007 ug/ul / 0.014 ug/ul / 0.07 ug/ul / 0.14 ug/ul / 0.28 ug/ul / 0.7 ug/ul	Population (Population-Population growth rate, Response Site: Not reported)	NOEC (0.28 ug/ul)	Development/Growth	Medium	789981

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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
84-74-2	4 Day(s), (4 Day(s))	*Skeletonema costatum* (Diatom), Exponential growth phase (log), Not Reported, Laboratory	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 ug/ul / 0.0014 ug/ul / 0.007 ug/ul / 0.014 ug/ul / 0.07 ug/ul / 0.14 ug/ul / 0.28 ug/ul / 0.7 ug/ul	Population (Population-Population growth rate, Response Site: Not reported)	LOEC (0.7 ug/ul)	Development/Growth	Medium	789981
84-74-2	4 Day(s), (4 Day(s))	*Skeletonema costatum* (Diatom), Exponential growth phase (log), Not Reported, Laboratory	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 ug/ul / 0.0012 ug/ul / 0.006 ug/ul / 0.012 ug/ul / 0.06 ug/ul / 0.12 ug/ul / 0.24 ug/ul / 0.6 ug/ul	Population (Population-Population growth rate, Response Site: Not reported)	NOEC (0.24 ug/ul)	Development/Growth	Medium	789981
84-74-2	4 Day(s), (4 Day(s))	*Skeletonema costatum* (Diatom), Exponential growth phase (log), Not Reported, Laboratory	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 ug/ul / 0.0012 ug/ul / 0.006 ug/ul / 0.012 ug/ul / 0.06 ug/ul / 0.12 ug/ul / 0.24 ug/ul / 0.6 ug/ul	Population (Population-Population growth rate, Response Site: Not reported)	LOEC (0.6 ug/ul)	Development/Growth	Medium	789981
84-74-2	4 Day(s), (4 Day(s))	*Skeletonema costatum* (Diatom), Exponential growth phase (log), Not Reported, Laboratory	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 ug/ul / 0.001 ug/ul / 0.005 ug/ul / 0.01 ug/ul / 0.05 ug/ul / 0.1 ug/ul / 0.2 ug/ul / 0.5 ug/ul	Population (Population-Population growth rate, Response Site: Not reported)	NOEC (0.2 ug/ul)	Development/Growth	Medium	789981
84-74-2	4 Day(s), (4 Day(s))	*Skeletonema costatum* (Diatom), Exponential growth phase (log), Not Reported, Laboratory	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Measured	0 ug/ul / 0.001 ug/ul / 0.005 ug/ul / 0.01 ug/ul / 0.05 ug/ul / 0.1 ug/ul / 0.2 ug/ul / 0.5 ug/ul	Population (Population-Population growth rate, Response Site: Not reported)	LOEC (0.5 ug/ul)	Development/Growth	Medium	789981

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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
84-74-2	1-<36 Day(s), (<36 Day(s))	*Synechococcus lividus* (Blue-Green Algae), Not reported, Not Reported, Laboratory (SUPPLIED FROM STOCK CULTURES MAINTAINED BY THE MARINE BIOLOGY LABORATORY AT CALIFORNIA STATE UNIVERSITY LONG BEACH OR WERE OBTAINED FROM THE CAROLINIA BIOLOGICAL SUPPLY CO. (BURLINGTON, NC).)	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Not reported	0 uM / 0.01 uM / 0.1 uM / 0.5 uM / 1 uM / 10 uM	Population (Population-Population growth rate, Response Site: Not reported)	NR (0.01-10 uM)	Development/Growth	Uninformative	790153

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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
84-74-2	1-4 Day(s), (4 Day(s))	*Thalassiosira pseudonana* (Diatom), Not reported, Not Reported, Laboratory (SUPPLIED FROM STOCK CULTURES MAINTAINED BY THE MARINE BIOLOGY LABORATORY AT CALIFORNIA STATE UNIVERSITY LONG BEACH OR WERE OBTAINED FROM THE CAROLINIA BIOLOGICAL SUPPLY CO. (BURLINGTON, NC).)	Salt water, Aqueous (aquatic habitat), Static, Not Reported	Not reported	0 uM / 10 uM / 25 uM / 50 uM / 100 uM	Population (Population-Population growth rate, Response Site: Not reported)	NR (10-100 uM)	Development/Growth	Uninformative	790153

* 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
84-74-2	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
84-74-2	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
84-74-2	9 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	0.001775 mg/L / 0.001775 mg/L / 0.0207 mg/L / 0.196 mg/L / 1.984 mg/L / 20.093 mg/L / 29.227 mg/L / 39.470 mg/L	Growth (Development-Normal, Response Site: Not reported)	EC50 (8.37 (4.84-10.14) mg/L)	Development/Growth	Medium	697762
84-74-2	<=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	0.001775 mg/L / 0.001775 mg/L / 0.0207 mg/L / 0.196 mg/L / 1.984 mg/L / 20.093 mg/L / 29.227 mg/L / 39.470 mg/L	Growth (Development-Cell cleavage, Response Site: Not reported)	NOEC (39.470 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
84-74-2	<=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	0.001775 mg/L / 0.001775 mg/L / 0.0207 mg/L / 0.196 mg/L / 1.984 mg/L / 20.093 mg/L / 29.227 mg/L / 39.470 mg/L	Growth (Development-Normal, Response Site: Not reported)	NOEC (0.196 mg/L)	Development/Growth	Medium	697762
84-74-2	<=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	0.001775 mg/L / 0.001775 mg/L / 0.0207 mg/L / 0.196 mg/L / 1.984 mg/L / 20.093 mg/L / 29.227 mg/L / 39.470 mg/L	Growth (Development-Normal, Response Site: Not reported)	LOEC (1.984 mg/L)	Development/Growth	Medium	697762
84-74-2	<=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	0.001775 mg/L / 0.001775 mg/L / 0.0207 mg/L / 0.196 mg/L / 1.984 mg/L / 20.093 mg/L / 29.227 mg/L / 39.470 mg/L	Growth (Development-Metamorphosis, Response Site: Not reported)	NOEC (0.0207 mg/L)	Development/Growth	Medium	697762
84-74-2	<=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	0.001775 mg/L / 0.001775 mg/L / 0.0207 mg/L / 0.196 mg/L / 1.984 mg/L / 20.093 mg/L / 29.227 mg/L / 39.470 mg/L	Growth (Development-Metamorphosis, Response Site: Not reported)	LOEC (0.196 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
84-74-2	<=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	0.001775 mg/L / 0.001775 mg/L / 0.0207 mg/L / 0.196 mg/L / 1.984 mg/L / 20.093 mg/L / 29.227 mg/L / 39.470 mg/L	Growth (Development-Normal, Response Site: Not reported)	NOEC (29.227 mg/L)	Development/Growth	Medium	697762
84-74-2	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 / 0.05 mg/L / 0.2 mg/L / 2 mg/L / 10 mg/L / 15 mg/L	Growth (Development-Abnormal, Response Site: Not reported)	NOEC (2 mg/L)	Development/Growth	Medium	1322103
84-74-2	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 / 0.05 mg/L / 0.2 mg/L / 2 mg/L / 10 mg/L / 15 mg/L	Growth (Development-Abnormal, Response Site: Not reported)	LOEC (10 mg/L)	Development/Growth	Medium	1322103
84-74-2	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 / 0.05 mg/L / 0.2 mg/L / 2 mg/L / 10 mg/L / 15 mg/L	Population (Population-Settling, Response Site: Not reported)	LOEC (0.05 mg/L)	Development/Growth	Medium	1322103

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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
84-74-2	14 Day(s), (14 Day(s))	*Mollusca* (Mollusk Phylum), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (0.34 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Mollusca* (Mollusk Phylum), Not reported, Not Reported, Wild (COLONIZED FROM FIELD AQUARIA IN SANTA ROSA SOUND, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.036 mg/L / 0.45 mg/L / 3.8 mg/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (3.8 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Mollusca* (Mollusk Phylum), Not reported, Not Reported, Wild (COLONIZED FROM FIELD AQUARIA IN SANTA ROSA SOUND, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.036 mg/L / 0.45 mg/L / 3.8 mg/L	Population (Population-Diversity, Evenness, Response Site: Not reported)	LOEC (3.8 mg/L)	Development/Growth	Medium	5495608

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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
84-74-2	14 Day(s), (14 Day(s))	*Mollusca* (Mollusk Phylum), Not reported, Not Reported, Wild (COLONIZED FROM FIELD AQUARIA IN SANTA ROSA SOUND, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.036 mg/L / 0.45 mg/L / 3.8 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (0.45 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Mollusca* (Mollusk Phylum), Not reported, Not Reported, Wild (COLONIZED FROM FIELD AQUARIA IN SANTA ROSA SOUND, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.036 mg/L / 0.45 mg/L / 3.8 mg/L	Population (Population-Diversity, Evenness, Response Site: Not reported)	NOEC (0.45 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Mollusca* (Mollusk Phylum), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (3.7 mg/L)	Development/Growth	Medium	5495608

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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
84-74-2	14 Day(s), (14 Day(s))	*Mollusca* (Mollusk Phylum), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Diversity, Evenness, Response Site: Not reported)	LOEC (3.7 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Mollusca* (Mollusk Phylum), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Diversity, Evenness, Response Site: Not reported)	NOEC (0.34 mg/L)	Development/Growth	Medium	5495608

* 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: Fungi Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
84-74-2	6 Month(s), (6 Month(s))	*Fungi* (Fungi Kingdom), Not reported, Not Reported, Not reported	Fresh water, Aqueous (aquatic habitat), Not reported, Not Reported	Unmeasured	0 ug/L / 9840-19860 ug/L	Population (Population-Abundance, Response Site: Not reported)	NR (9840-19860 ug/L)	Development/Growth	Uninformative	1323196

* 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
84-74-2	7 Day(s), (7 Day(s))	*Lemna minor* (Duckweed), Not reported, Not Reported, Wild (COLLECTED FROM TAI LAKE IN CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.005 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2.5 mg/L / 7.5 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Whole organism)	LOEC (0.005 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Photosynthesis	High	1323213
84-74-2	7 Day(s), (7 Day(s))	*Lemna minor* (Duckweed), Not reported, Not Reported, Wild (COLLECTED FROM TAI LAKE IN CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.005 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2.5 mg/L / 7.5 mg/L	Biochemical (Biochemistry-Chlorophyll, Response Site: Whole organism)	NR (0.005-7.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Photosynthesis	High	1323213
84-74-2	7 Day(s), (7 Day(s))	*Lemna minor* (Duckweed), Not reported, Not Reported, Wild (COLLECTED FROM TAI LAKE IN CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.005 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2.5 mg/L / 7.5 mg/L	Biochemical (Biochemistry-Chlorophyll, Response Site: Whole organism)	NOEC (2.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Photosynthesis	High	1323213
84-74-2	7 Day(s), (7 Day(s))	*Lemna minor* (Duckweed), Not reported, Not Reported, Wild (COLLECTED FROM TAI LAKE IN CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.005 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2.5 mg/L / 7.5 mg/L	Biochemical (Biochemistry-Protein content, Response Site: Whole organism)	NOEC (1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Photosynthesis	High	1323213

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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
84-74-2	7 Day(s), (7 Day(s))	*Lemna minor* (Duckweed), Not reported, Not Reported, Wild (COLLECTED FROM TAI LAKE IN CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.005 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2.5 mg/L / 7.5 mg/L	Physiology (Injury-Chlorosis, Response Site: Not reported)	NR (0.5-7.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Photosynthesis	High	1323213
84-74-2	7 Day(s), (7 Day(s))	*Lemna minor* (Duckweed), Not reported, Not Reported, Wild (COLLECTED FROM TAI LAKE IN CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.005 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2.5 mg/L / 7.5 mg/L	Biochemical (Biochemistry-Protein content, Response Site: Whole organism)	LOEC (2.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Photosynthesis	High	1323213
84-74-2	7 Day(s), (7 Day(s))	*Lemna minor* (Duckweed), Not reported, Not Reported, Wild (COLLECTED FROM TAI LAKE IN CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.005 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2.5 mg/L / 7.5 mg/L	Biochemical (Biochemistry-Chlorophyll, Response Site: Whole organism)	LOEC (7.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Photosynthesis	High	1323213
84-74-2	7 Day(s), (7 Day(s))	*Lemna minor* (Duckweed), Not reported, Not Reported, Wild (COLLECTED FROM TAI LAKE IN CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.005 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2.5 mg/L / 7.5 mg/L	Growth (Morphology-Quantity, Response Site: Leaf/needle)	LOEC (0.005 mg/L)	Development/Growth	High	1323213

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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
84-74-2	7 Day(s), (7 Day(s))	*Lemna minor* (Duckweed), Not reported, Not Reported, Wild (COLLECTED FROM TAI LAKE IN CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.005 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2.5 mg/L / 7.5 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Whole organism)	LOEC (0.005 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Photosynthesis	High	1323213
84-74-2	7 Day(s), (7 Day(s))	*Lemna minor* (Duckweed), Not reported, Not Reported, Wild (COLLECTED FROM TAI LAKE IN CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.005 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2.5 mg/L / 7.5 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Whole organism)	LOEC (0.005 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Photosynthesis	High	1323213
84-74-2	7 Day(s), (7 Day(s))	*Spirodela polyrrhiza* (Large Duckweed), Not reported, Not Reported, Wild (COLLECTED FROM TAI LAKE IN CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.005 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2.5 mg/L / 7.5 mg/L	Growth (Morphology-Quantity, Response Site: Leaf/needle)	LOEC (0.05 mg/L)	Development/Growth	High	1323213
84-74-2	7 Day(s), (7 Day(s))	*Spirodela polyrrhiza* (Large Duckweed), Not reported, Not Reported, Wild (COLLECTED FROM TAI LAKE IN CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.005 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2.5 mg/L / 7.5 mg/L	Biochemical (Biochemistry-Protein content, Response Site: Whole organism)	LOEC (0.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Photosynthesis	High	1323213

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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
84-74-2	7 Day(s), (7 Day(s))	*Spirodela polyrrhiza* (Large Duckweed), Not reported, Not Reported, Wild (COLLECTED FROM TAI LAKE IN CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.005 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2.5 mg/L / 7.5 mg/L	Biochemical (Biochemistry-Chlorophyll, Response Site: Whole organism)	LOEC (7.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Photosynthesis	High	1323213
84-74-2	7 Day(s), (7 Day(s))	*Spirodela polyrrhiza* (Large Duckweed), Not reported, Not Reported, Wild (COLLECTED FROM TAI LAKE IN CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.005 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2.5 mg/L / 7.5 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Whole organism)	NOEC (0.005 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Photosynthesis	High	1323213
84-74-2	7 Day(s), (7 Day(s))	*Spirodela polyrrhiza* (Large Duckweed), Not reported, Not Reported, Wild (COLLECTED FROM TAI LAKE IN CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.005 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2.5 mg/L / 7.5 mg/L	Growth (Morphology-Quantity, Response Site: Leaf/needle)	NOEC (0.005 mg/L)	Development/Growth	High	1323213
84-74-2	7 Day(s), (7 Day(s))	*Spirodela polyrrhiza* (Large Duckweed), Not reported, Not Reported, Wild (COLLECTED FROM TAI LAKE IN CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.005 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2.5 mg/L / 7.5 mg/L	Biochemical (Biochemistry-Protein content, Response Site: Whole organism)	NOEC (0.05 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Photosynthesis	High	1323213

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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
84-74-2	7 Day(s), (7 Day(s))	*Spirodela polyrrhiza* (Large Duckweed), Not reported, Not Reported, Wild (COLLECTED FROM TAI LAKE IN CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.005 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2.5 mg/L / 7.5 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Whole organism)	LOEC (0.005 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Photosynthesis	High	1323213
84-74-2	7 Day(s), (7 Day(s))	*Spirodela polyrrhiza* (Large Duckweed), Not reported, Not Reported, Wild (COLLECTED FROM TAI LAKE IN CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.005 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2.5 mg/L / 7.5 mg/L	Biochemical (Biochemistry-Chlorophyll, Response Site: Whole organism)	NOEC (2.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Photosynthesis	High	1323213
84-74-2	7 Day(s), (7 Day(s))	*Spirodela polyrrhiza* (Large Duckweed), Not reported, Not Reported, Wild (COLLECTED FROM TAI LAKE IN CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.005 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2.5 mg/L / 7.5 mg/L	Biochemical (Biochemistry-Malondialdehyde, Response Site: Whole organism)	LOEC (0.005 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Photosynthesis	High	1323213
84-74-2	7 Day(s), (7 Day(s))	*Spirodela polyrrhiza* (Large Duckweed), Not reported, Not Reported, Wild (COLLECTED FROM TAI LAKE IN CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.005 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2.5 mg/L / 7.5 mg/L	Biochemical (Biochemistry-Chlorophyll, Response Site: Whole organism)	NR (0.005-7.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Photosynthesis	High	1323213

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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
84-74-2	7 Day(s), (7 Day(s))	*Spirodela polyrrhiza* (Large Duckweed), Not reported, Not Reported, Wild (COLLECTED FROM TAI LAKE IN CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.005 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2.5 mg/L / 7.5 mg/L	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Whole organism)	LOEC (0.05 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Photosynthesis	High	1323213
84-74-2	7 Day(s), (7 Day(s))	*Spirodela polyrrhiza* (Large Duckweed), Not reported, Not Reported, Wild (COLLECTED FROM TAI LAKE IN CHINA)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 mg/L / 0.005 mg/L / 0.05 mg/L / 0.5 mg/L / 1 mg/L / 2.5 mg/L / 7.5 mg/L	Physiology (Injury-Chlorosis, Response Site: Not reported)	NR (0.5-7.5 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Oxidative stress (including redox biology); Photosynthesis	High	1323213

* 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
84-74-2	14 Day(s), (14 Day(s))	*Actiniaria* (Anemone Order), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (0.34 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Actiniaria* (Anemone Order), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (3.7 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Actiniaria* (Anemone Order), Not reported, Not Reported, Wild (COLONIZED FROM FIELD AQUARIA IN SANTA ROSA SOUND, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.036 mg/L / 0.45 mg/L / 3.8 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (3.8 mg/L)	Development/Growth	Medium	5495608

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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
84-74-2	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
84-74-2	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)	LOEC (1 mg/L)	Reproductive/Teratogenic	Medium	3070931
84-74-2	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 (0.5 mg/L)	Reproductive/Teratogenic	Medium	3070931
84-74-2	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
84-74-2	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)	LOEC (0.05 mg/L)	Reproductive/Teratogenic	Medium	3070931
84-74-2	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)	LOEC (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
84-74-2	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)	LOEC (2 mg/L)	Reproductive/Teratogenic	Medium	3070931
84-74-2	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 (1 mg/L)	Reproductive/Teratogenic	Medium	3070931
84-74-2	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 (1 mg/L)	Reproductive/Teratogenic	Medium	3070931
84-74-2	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 (1 mg/L)	Reproductive/Teratogenic	Medium	3070931
84-74-2	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)	NR (0.05-2 mg/L)	Reproductive/Teratogenic	Medium	3070931
84-74-2	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)	LOEC (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
84-74-2	~48 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-Mortality, Response Site: Not reported)	NR-LETH (5000 ug/L)	Mortality	Medium	1336226
84-74-2	~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)	LOEC (500 ug/L)	Reproductive/Teratogenic	Medium	1336226
84-74-2	~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)	NR (0.005-500 ug/L)	Reproductive/Teratogenic	Medium	1336226
84-74-2	~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 (50 ug/L)	Reproductive/Teratogenic	Medium	1336226
84-74-2	~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)	LOEC (500 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
84-74-2	~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 (50 ug/L)	Reproductive/Teratogenic	Medium	1336226
84-74-2	~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 (50 ug/L)	Mortality	Medium	1336226
84-74-2	~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)	LOEC (500 ug/L)	Mortality	Medium	1336226
84-74-2	14 Day(s), (14 Day(s))	*Echinodermata* (Echinoderm Phylum), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (3.7 mg/L)	Development/Growth	Medium	5495608

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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
84-74-2	14 Day(s), (14 Day(s))	*Echinodermata* (Echinoderm Phylum), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Diversity, Evenness, Response Site: Not reported)	NOEC (3.7 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Molgula manhattensis* (Sea Squirt), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (3.7 mg/L)	Development/Growth	Medium	5495608

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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
84-74-2	14 Day(s), (14 Day(s))	*Molgula manhattensis* (Sea Squirt), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (0.34 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Ophiophragmus filograneus* (Brittlestar), Not reported, Not Reported, Wild (COLONIZED FROM FIELD AQUARIA IN SANTA ROSA SOUND, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.036 mg/L / 0.45 mg/L / 3.8 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (3.8 mg/L)	Development/Growth	Medium	5495608

* 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: Unknown Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
84-74-2	14 Day(s), (14 Day(s))	*Animalia* (Animal Kingdom), Not reported, Not Reported, Wild (COLONIZED FROM FIELD AQUARIA IN SANTA ROSA SOUND, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.036 mg/L / 0.45 mg/L / 3.8 mg/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (3.8 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Animalia* (Animal Kingdom), Not reported, Not Reported, Wild (COLONIZED FROM FIELD AQUARIA IN SANTA ROSA SOUND, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.036 mg/L / 0.45 mg/L / 3.8 mg/L	Population (Population-Diversity, Evenness, Response Site: Not reported)	LOEC (3.8 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Animalia* (Animal Kingdom), Not reported, Not Reported, Wild (COLONIZED FROM FIELD AQUARIA IN SANTA ROSA SOUND, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.036 mg/L / 0.45 mg/L / 3.8 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (0.45 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Animalia* (Animal Kingdom), Not reported, Not Reported, Wild (COLONIZED FROM FIELD AQUARIA IN SANTA ROSA SOUND, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.036 mg/L / 0.45 mg/L / 3.8 mg/L	Population (Population-Diversity, Evenness, Response Site: Not reported)	NOEC (0.45 mg/L)	Development/Growth	Medium	5495608

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Aquatic: Unknown Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
84-74-2	14 Day(s), (14 Day(s))	*Animalia* (Animal Kingdom), Not reported, Not Reported, Wild (COLONIZED FROM FIELD AQUARIA IN SANTA ROSA SOUND, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.036 mg/L / 0.45 mg/L / 3.8 mg/L	Population (Population-Diversity, Evenness, Response Site: Not reported)	NOEC (3.8 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Animalia* (Animal Kingdom), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (3.7 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Animalia* (Animal Kingdom), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Diversity, Evenness, Response Site: Not reported)	LOEC (3.7 mg/L)	Development/Growth	Medium	5495608

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Aquatic: Unknown Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
84-74-2	14 Day(s), (14 Day(s))	*Animalia* (Animal Kingdom), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (0.34 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Animalia* (Animal Kingdom), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Diversity, Evenness, Response Site: Not reported)	NOEC (0.34 mg/L)	Development/Growth	Medium	5495608

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Aquatic: Unknown Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
84-74-2	14 Day(s), (14 Day(s))	*Animalia* (Animal Kingdom), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Diversity, Evenness, Response Site: Not reported)	NOEC (3.7 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Chordata* (Chordate Phylum), Not reported, Not Reported, Wild (COLONIZED FROM FIELD AQUARIA IN SANTA ROSA SOUND, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.036 mg/L / 0.45 mg/L / 3.8 mg/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (3.8 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Chordata* (Chordate Phylum), Not reported, Not Reported, Wild (COLONIZED FROM FIELD AQUARIA IN SANTA ROSA SOUND, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.036 mg/L / 0.45 mg/L / 3.8 mg/L	Population (Population-Diversity, Evenness, Response Site: Not reported)	NOEC (3.8 mg/L)	Development/Growth	Medium	5495608

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Aquatic: Unknown Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
84-74-2	14 Day(s), (14 Day(s))	*Chordata* (Chordate Phylum), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Diversity, Evenness, Response Site: Not reported)	LOEC (3.7 mg/L)	Development/Growth	Medium	5495608
84-74-2	14 Day(s), (14 Day(s))	*Chordata* (Chordate Phylum), Not reported, Not Reported, Wild (FROM SETTLING OF PLANKTONIC LARVAE ENTRAINED IN CONTINUOUSLY-SUPPLIED UNFILTERED SEA WATER FROM SANTA ROSA SOUNDS, FLORIDA)	Salt water, Aqueous (aquatic habitat), Flow-through, Not Reported	Measured	0 mg/L / 0.044 mg/L / 0.34 mg/L / 3.7 mg/L	Population (Population-Diversity, Evenness, Response Site: Not reported)	NOEC (0.34 mg/L)	Development/Growth	Medium	5495608

* 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
84-74-2	24 Hour(s), (24 Hour(s))	*Dermatophagoides farinae* (American House Dust Mite), Adult, 7-10 Day(s), Not Reported, Laboratory (NR)	No substrate, Environmental, Fumigation, 102 Organism	Unmeasured	0 ug/cm2 / 152.7 ug/cm2	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (152.7 ug/cm2)	Mortality	Medium	485854
84-74-2	24 Hour(s), (24 Hour(s))	*Dermatophagoides farinae* (American House Dust Mite), Adult, 7-10 Day(s), Not Reported, Laboratory (NR)	No substrate, Environmental, Fumigation, 90 Organism	Unmeasured	0 ug/cm2 / 152.7 ug/cm2	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (152.7 ug/cm2)	Mortality	Medium	485854
84-74-2	24 Hour(s), (24 Hour(s))	*Dermatophagoides farinae* (American House Dust Mite), Adult, 7-10 Day(s), Not Reported, Laboratory (NR)	Fabric or similar material, Environmental, Direct application, 419 Organism	Unmeasured	NR / NR / NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LD50 (79.54 (75.86-83.49) ug/cm2)	Mortality	Medium	485854
84-74-2	24 Hour(s), (24 Hour(s))	*Dermatophagoides farinae* (American House Dust Mite), Adult, 7-10 Day(s), Not Reported, Laboratory (COLONY MAINTAINED IN LABORATORY FOR 6 YEARS)	No substrate, Environmental, Fumigation, 102 Organism	Unmeasured	0 ug/cm3 / 101.92 ug/cm3	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (101.92 ug/cm3)	Mortality	Medium	1332803

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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
84-74-2	24 Hour(s), (24 Hour(s))	*Dermatophagoides farinae* (American House Dust Mite), Adult, 7-10 Day(s), Not Reported, Laboratory (COLONY MAINTAINED IN LABORATORY FOR 6 YEARS)	No substrate, Environmental, Fumigation, 90 Organism	Unmeasured	0 ug/cm3 / 101.92 ug/cm3	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (101.92 ug/cm3)	Mortality	Medium	1332803
84-74-2	24 Hour(s), (24 Hour(s))	*Dermatophagoides farinae* (American House Dust Mite), Adult, 7-10 Day(s), Not Reported, Laboratory (COLONY MAINTAINED IN LABORATORY FOR 6 YEARS)	Fabric or similar material, Environmental, Environmental, unspecified, 375 Organism	Unmeasured	0 ug/cm3 / 0.08 ug/cm3 / 1.6 ug/cm3 / 3.2 ug/cm3 / 6.4 ug/cm3 / 12.7 ug/cm3 / 25.5 ug/cm3 / 50.9 ug/cm3 / 101.8 ug/cm3	Mortality (Mortality-Mortality, Response Site: Not reported)	LD50 (33.92 (30.05-38.20) ug/cm3)	Mortality	Medium	1332803
84-74-2	24 Hour(s), (24 Hour(s))	*Dermatophagoides farinae* (American House Dust Mite), Adult, 7-10 Day(s), Both, Laboratory (MAINTAINED IN THE LABORATORY FOR MORE THAN 8 YEARS WITHOUT EXPOSURE TO ANY KNOWN ACARICIDE)	Fabric or similar material, Environmental, Environmental, unspecified, 300 Organism	Unmeasured	NR / NR / NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LD50 (281.0 (258.3-306.2) mg/m2)	Mortality	Medium	1323180

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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
84-74-2	24 Hour(s), (24 Hour(s))	*Dermatophagoides farinae* (American House Dust Mite), Adult, 7-10 Day(s), Not Reported, Laboratory (ORIGINALLY OBTAINED FROM I. Y. LEE (DEPARTMENT OF PARASITOLOGY, COLLEGE OF MEDICINE, YONSEI UNIVERSITY, SEOUL) IN 1999, MAINTAINED IN THE LABORATORY)	Fabric or similar material, Environmental, Environmental, unspecified, Not Reported	Unmeasured	NR / NR / NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LD50 (173.9 (159.0-191.4) mg/m2)	Mortality	Medium	1341977
84-74-2	24 Hour(s), (24 Hour(s))	*Dermatophagoides farinae* (American House Dust Mite), Adult, 7-10 Day(s), Not Reported, Laboratory (STOCK CULTURE)	Fabric or similar material, Environmental, Environmental, unspecified, Not Reported	Unmeasured	NR / NR / NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (218.9 (201.2-239.0) mg/m2)	Mortality	Medium	788260
84-74-2	24 Hour(s), (24 Hour(s))	*Dermatophagoides pteronyssinus* (European House Dust Mite), Adult, 7-10 Day(s), Not Reported, Laboratory (NR)	No substrate, Environmental, Fumigation, 100 Organism	Unmeasured	0 ug/cm2 / 152.7 ug/cm2	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (152.7 ug/cm2)	Mortality	Medium	485854

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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
84-74-2	24 Hour(s), (24 Hour(s))	*Dermatophagoides pteronyssinus* (European House Dust Mite), Adult, 7-10 Day(s), Not Reported, Laboratory (NR)	Fabric or similar material, Environmental, Direct application, 419 Organism	Unmeasured	NR / NR / NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LD50 (77.79 (74.36-81.47) ug/cm2)	Mortality	Medium	485854
84-74-2	24 Hour(s), (24 Hour(s))	*Dermatophagoides pteronyssinus* (European House Dust Mite), Adult, 7-10 Day(s), Not Reported, Laboratory (NR)	No substrate, Environmental, Fumigation, 110 Organism	Unmeasured	0 ug/cm2 / 152.7 ug/cm2	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (152.7 ug/cm2)	Mortality	Medium	485854
84-74-2	24 Hour(s), (24 Hour(s))	*Dermatophagoides pteronyssinus* (European House Dust Mite), Adult, 7-10 Day(s), Not Reported, Laboratory (COLONY MAINTAINED IN LABORATORY FOR 6 YEARS)	No substrate, Environmental, Fumigation, 66 Organism	Unmeasured	0 ug/cm3 / 101.92 ug/cm3	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (101.92 ug/cm3)	Mortality	Medium	1332803
84-74-2	24 Hour(s), (24 Hour(s))	*Dermatophagoides pteronyssinus* (European House Dust Mite), Adult, 7-10 Day(s), Not Reported, Laboratory (COLONY MAINTAINED IN LABORATORY FOR 6 YEARS)	No substrate, Environmental, Fumigation, 83 Organism	Unmeasured	0 ug/cm3 / 101.92 ug/cm3	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (101.92 ug/cm3)	Mortality	Medium	1332803

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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
84-74-2	24 Hour(s), (24 Hour(s))	*Dermatophagoides pteronyssinus* (European House Dust Mite), Adult, 7-10 Day(s), Not Reported, Laboratory (COLONY MAINTAINED IN LABORATORY FOR 6 YEARS)	Fabric or similar material, Environmental, Environmental, unspecified, 396 Organism	Unmeasured	0 ug/cm3 / 0.08 ug/cm3 / 1.6 ug/cm3 / 3.2 ug/cm3 / 6.4 ug/cm3 / 12.7 ug/cm3 / 25.5 ug/cm3 / 50.9 ug/cm3 / 101.8 ug/cm3	Mortality (Mortality-Mortality, Response Site: Not reported)	LD50 (31.59 (27.85-35.61) ug/cm3)	Mortality	Medium	1332803
84-74-2	24 Hour(s), (24 Hour(s))	*Dermatophagoides pteronyssinus* (European House Dust Mite), Adult, 7-10 Day(s), Both, Laboratory (MAINTAINED IN THE LABORATORY FOR MORE THAN 8 YEARS WITHOUT EXPOSURE TO ANY KNOWN ACARICIDE)	Fabric or similar material, Environmental, Environmental, unspecified, 500 Organism	Unmeasured	NR / NR / NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LD50 (285.1 (254.9-318.8) mg/m2)	Mortality	Medium	1323180

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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
84-74-2	24 Hour(s), (24 Hour(s))	*Dermatophagoides pteronyssinus* (European House Dust Mite), Adult, 7-10 Day(s), Not Reported, Laboratory (ORIGINALLY OBTAINED FROM I. Y. LEE (DEPARTMENT OF PARASITOLOGY, COLLEGE OF MEDICINE, YONSEI UNIVERSITY, SEOUL) IN 1999, MAINTAINED IN THE LABORATORY)	Fabric or similar material, Environmental, Environmental, unspecified, Not Reported	Unmeasured	NR / NR / NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LD50 (188.1 (173.3-206.2) mg/m2)	Mortality	Medium	1341977
84-74-2	24 Hour(s), (24 Hour(s))	*Dermatophagoides pteronyssinus* (European House Dust Mite), Adult, 7-10 Day(s), Not Reported, Laboratory (STOCK CULTURE)	Fabric or similar material, Environmental, Environmental, unspecified, Not Reported	Unmeasured	NR / NR / NR / NR / NR / NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (232.3 (212.3-255.8) mg/m2)	Mortality	Medium	788260
84-74-2	7 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEL (100 uM diet)	Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Boule mRNA, Response Site: Not reported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Reproductive/Teratogenic	Medium	2510760

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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
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-CG14034 mRNA, Response Site: Not reported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-CG15116 mRNA, Response Site: Not reported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-CG17575 mRNA, Response Site: Not reported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	4 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Serpin 77Bc mRNA, Re-sponse Site: Not reported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	4-13 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Hatch, Response Site: Not re-ported)	LOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760

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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
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Accessory gland protein 76A mRNA, Response Site: Not re-ported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	4-13 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760
84-74-2	NA Egg to adult, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, Not reported	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet / 1000 uM diet / 10000 uM diet	Accumulation (Accumulation-Residue, Re-sponse Site: Tis-sue)	NR (10-10000 uM diet)	ADME (biotrans-formation)	Medium	2510760
84-74-2	5 Days post-emergence, (5 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 10-15 Male organisms	Unmeasured	0 uM diet / 100 uM diet	Reproduction (Reproduction-Sperm cell counts, Response Site: Testes)	NOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 10 Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Quiescin sulfhydryl oxi-dase 2 mRNA, Response Site: Not reported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Accessory gland protein 62F mRNA, Re-sponse Site: Not reported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Accessory gland protein 36DE mRNA, Response Site: Not re-ported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760

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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
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Accessory gland protein 29AB mRNA, Response Site: Not re-ported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Lectin-46Cb mRNA, Response Site: Not reported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Heat shock 70-kDa protein cognate 3 mRNA, Re-sponse Site: Not reported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Ecdysone re-ceptor mRNA, Response Site: Not reported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-FK506-binding protein 14 mRNA, Re-sponse Site: Not reported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Ejaculatory bulb protein mRNA, Response Site: Not reported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760

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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
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Serpin 28F mRNA, Re-sponse Site: Not reported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Ribonuclease X25 mRNA, Re-sponse Site: Not reported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 10 Male organisms	Unmeasured	0 uM diet / 100 uM diet / 1000 uM diet	Biochemical (Biochemistry-Ovulin, Response Site: Accessory gland)	LOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Serpin 38F mRNA, Re-sponse Site: Not reported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Trypsin alpha-3 mRNA, Response Site: Not reported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	4 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Fecundity, Re-sponse Site: Not reported)	LOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760

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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
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, Not Reported	Unmeasured	0 uM diet / 100 uM diet / 1000 uM diet	Biochemical (Biochemistry-Ovulin, Response Site: Not re-ported)	LOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-CG9997 mRNA, Response Site: Not reported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Calreticulin mRNA, Response Site: Not re-ported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-CG31872 mRNA, Response Site: Not reported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-CG2918 mRNA, Response Site: Not reported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	4-13 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Fecundity, Re-sponse Site: Not reported)	LOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760

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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
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 10 Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Accessory gland protein 32CD mRNA, Response Site: Not re-ported)	LOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 10 Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-CG11598 mRNA, Response Site: Not reported)	LOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 10 Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Estrogen related receptor mRNA, Response Site: Not reported)	LOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 10 Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Glucose dehydrogenase mRNA, Response Site: Not re-ported)	LOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 10 Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Ovulin mRNA, Response Site: Not re-ported)	LOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 10 Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Seminal metalloprotease-1 mRNA, Response Site: Not re-ported)	LOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760

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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
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 10 Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Seminase mRNA, Response Site: Not reported)	LOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 10 Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Sex peptide mRNA, Response Site: Not reported)	LOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signal-ing/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	8 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Hatch, Response Site: Not re-ported)	LOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760
84-74-2	9 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Hatch, Response Site: Not re-ported)	LOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760
84-74-2	4 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Fecundity, Re-sponse Site: Not reported)	NOEL (10 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760
84-74-2	4 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEL (10 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760
84-74-2	4-13 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Fecundity, Re-sponse Site: Not reported)	NOEL (10 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760

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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
84-74-2	4-13 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Hatch, Response Site: Not reported)	NOEL (10 uM diet)	Reproductive/Teratogenic	Medium	2510760
84-74-2	6 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEL (100 uM diet)	Reproductive/Teratogenic	Medium	2510760
84-74-2	4-13 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEL (10 uM diet)	Reproductive/Teratogenic	Medium	2510760
84-74-2	9 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Hatch, Response Site: Not reported)	NOEL (10 uM diet)	Reproductive/Teratogenic	Medium	2510760
84-74-2	10 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEL (100 uM diet)	Reproductive/Teratogenic	Medium	2510760
84-74-2	10 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Hatch, Response Site: Not reported)	NOEL (100 uM diet)	Reproductive/Teratogenic	Medium	2510760
84-74-2	10 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEL (100 uM diet)	Reproductive/Teratogenic	Medium	2510760
84-74-2	11 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEL (100 uM diet)	Reproductive/Teratogenic	Medium	2510760

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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
84-74-2	11 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Hatch, Response Site: Not re-ported)	NOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760
84-74-2	8 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Hatch, Response Site: Not re-ported)	NOEL (10 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760
84-74-2	11 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760
84-74-2	5 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Hatch, Response Site: Not re-ported)	NOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760
84-74-2	4-13 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet / 1000 uM diet / 10000 uM diet	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760
84-74-2	8 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760
84-74-2	9 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Fecundity, Re-sponse Site: Not reported)	NOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760
84-74-2	9 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760

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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
84-74-2	7 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Hatch, Response Site: Not reported)	NOEL (100 uM diet)	Reproductive/Teratogenic	Medium	2510760
84-74-2	8 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEL (100 uM diet)	Reproductive/Teratogenic	Medium	2510760
84-74-2	4-13 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet / 1000 uM diet / 10000 uM diet	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEL (10 uM diet)	Reproductive/Teratogenic	Medium	2510760
84-74-2	6 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEL (100 uM diet)	Reproductive/Teratogenic	Medium	2510760
84-74-2	7 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEL (100 uM diet)	Reproductive/Teratogenic	Medium	2510760
84-74-2	NA Egg to adult, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet / 1000 uM diet / 10000 uM diet	Growth (Morphology-Abnormal, Response Site: Not reported)	NR (10000 uM diet)	Development/Growth	Medium	2510760
84-74-2	NA Egg to adult, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet / 1000 uM diet / 10000 uM diet	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (10000 uM diet)	Mortality	Low	2510760
84-74-2	3 Days post-emergence, (5 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, 10-15 Male organisms	Unmeasured	0 uM diet / 100 uM diet	Reproduction (Reproduction-Sperm cell counts, Response Site: Not reported)	LOEL (100 uM diet)	Reproductive/Teratogenic	Medium	2510760

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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
84-74-2	4 Days post-emergence, (5 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, 10-15 Male organisms	Unmeasured	0 uM diet / 100 uM diet	Reproduction (Reproduction-Sperm cell counts, Response Site: Not reported)	LOEL (100 uM diet)	Reproductive/Teratogenic	Medium	2510760
84-74-2	5 Days post-emergence, (5 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, 10-15 Male organisms	Unmeasured	0 uM diet / 100 uM diet	Reproduction (Reproduction-Sperm cell counts, Response Site: Not reported)	LOEL (100 uM diet)	Reproductive/Teratogenic	Medium	2510760
84-74-2	5 Days post-emergence, (5 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, 10-15 Male organisms	Unmeasured	0 uM diet / 100 uM diet	Reproduction (Reproduction-Sperm cell counts, Response Site: Seminal vesicle)	LOEL (100 uM diet)	Reproductive/Teratogenic	Medium	2510760
84-74-2	NA Egg to adult, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet / 1000 uM diet / 10000 uM diet	Growth (Development-Maturity, Response Site: Not reported)	NOEL (10000 uM diet)	Development/Growth	Medium	2510760
84-74-2	12 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Fecundity, Response Site: Not reported)	NOEL (100 uM diet)	Reproductive/Teratogenic	Medium	2510760
84-74-2	12 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEL (100 uM diet)	Reproductive/Teratogenic	Medium	2510760
84-74-2	12 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Hatch, Response Site: Not reported)	NOEL (100 uM diet)	Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Days post-emergence, (3 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 uM diet / 100 uM diet	Cellular (Genetics-Glycoprotein 93 mRNA, Response Site: Not reported)	NOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Reproductive/Teratogenic	Medium	2510760

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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
84-74-2	13 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Fecundity, Re-sponse Site: Not reported)	NOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760
84-74-2	13 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Hatch, Response Site: Not re-ported)	NOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760
84-74-2	13 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760
84-74-2	4 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Hatch, Response Site: Not re-ported)	NOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760
84-74-2	5 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Fecundity, Re-sponse Site: Not reported)	NOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760
84-74-2	5 Days post-emergence, (5 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 10-15 Male organisms	Unmeasured	0 uM diet / 100 uM diet	Reproduction (Reproduction-Sperm cell counts, Response Site: Testes)	LOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760
84-74-2	5 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760
84-74-2	6 Days post-emergence, (13 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gav-age), Food, 15-20 Male organisms	Unmeasured	0 uM diet / 10 uM diet / 100 uM diet	Reproduction (Reproduction-Hatch, Response Site: Not re-ported)	NOEL (100 uM diet)	Reproduc-tive/Teratogenic	Medium	2510760

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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
84-74-2	3 Days post-emergence, (5 Days post-emergence)	*Drosophila melanogaster* (Fruit Fly), Egg, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, 10-15 Male organisms	Unmeasured	0 uM diet / 100 uM diet	Reproduction (Reproduction-Sperm cell counts, Response Site: Not reported)	NOEL (100 uM diet)	Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Day(s), (3 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <24 Hours post-emergence, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 uM diet / 100 uM diet / 1000 uM diet	Physiology (Physiology-Lipid peroxidation, Response Site: Accessory gland)	LOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	3 Day(s), (3 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <24 Hours post-emergence, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 uM diet / 100 uM diet / 1000 uM diet	Biochemical (Biochemistry-Estrogen related receptor, Response Site: Reproductive tissue)	LOEL (100 uM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Reproductive/Teratogenic	Medium	2510760
84-74-2	72 Hour(s), (72 Hour(s))	*Drosophila melanogaster* (Fruit Fly), Not reported, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, Not reported	Unmeasured	10-2000 mM diet	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (1815 mM diet)	Mortality	Medium	2510760
84-74-2	13 Day(s), (13 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <24 Hours post-emergence, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 mM diet / 0.1 mM diet / 1 mM diet / 10 mM diet / 50 mM diet	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	LOEL (10 mM diet)	Reproductive/Teratogenic	Medium	2510760
84-74-2	13 Day(s), (13 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <24 Hours post-emergence, Male, Laboratory (NR)	No substrate, Oral (diet, drink, gavage), Food, Not Reported	Unmeasured	0 mM diet / 0.1 mM diet / 1 mM diet / 10 mM diet / 50 mM diet	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NOEL (1 mM diet)	Reproductive/Teratogenic	Medium	2510760
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Cellular (Genetics-Eukaryotic translation initiation factor 4E-binding protein 2 mRNA, Response Site: Not reported)	LOEL (15 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270

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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
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Cellular (Genetics-Adipokinetic hormone mRNA, Response Site: Not reported)	LOEL (15 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Biochemical (Biochemistry-Trehalose, Response Site: Whole organism)	LOEL (15 nM diet)	Nutritional and Metabolic	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Biochemical (Biochemistry-Trehalose, Response Site: Hemolymph)	LOEL (15 nM diet)	Nutritional and Metabolic	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Biochemical (Biochemistry-Lipid, Response Site: Not reported)	LOEL (15 nM diet)	Nutritional and Metabolic	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Biochemical (Biochemistry-Glycogen, Response Site: Whole organism)	LOEL (15 nM diet)	Nutritional and Metabolic	Medium	3350270

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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
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Cellular (Genetics-Multidrug resistance 50 mRNA, Response Site: Not reported)	LOEL (15 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Cellular (Genetics-Insulin-like peptide 2 mRNA, Response Site: Not reported)	LOEL (15 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Cellular (Genetics-Multidrug-Resistance like Protein 1 mRNA, Response Site: Not reported)	LOEL (15 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet / 45 nM diet / 150 nM diet	Cellular (Genetics-Insulin-like peptide 2 mRNA, Response Site: Not reported)	LOEL (15 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet / 45 nM diet / 150 nM diet	Behavior (Behavior-Sleeping, Response Site: Not reported)	NR (15-150 nM diet)	Behavioral	Medium	3350270

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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
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet / 45 nM diet / 150 nM diet	Behavior (Behavior-Distance moved, change in direct movement, Response Site: Not reported)	NR (15-150 nM diet)	Behavioral	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet / 45 nM diet / 150 nM diet	Cellular (Genetics-insl3 (insulin-like peptide 3) mRNA, Response Site: Not reported)	NOEL (45 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet / 45 nM diet / 150 nM diet	Cellular (Genetics-Insulin-like peptide 6 mRNA, Response Site: Not reported)	NOEL (45 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Biochemical (Biochemistry-Glucose, Response Site: Hemolymph)	LOEL (15 nM diet)	Nutritional and Metabolic	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet / 45 nM diet / 150 nM diet	Cellular (Genetics-Adipokinetic hormone mRNA, Response Site: Not reported)	NR (15-150 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270

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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
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 uM diet / 0.015 uM diet / 0.15 uM diet / 1.5 uM diet	Mortality (Mortality-Survival, Response Site: Not reported)	NR (0.015-1.5 uM diet)	Mortality	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet / 45 nM diet / 150 nM diet	Cellular (Genetics-Insulin-like peptide 5 mRNA, Response Site: Not reported)	NOEL (45 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet / 45 nM diet / 150 nM diet	Cellular (Genetics-insl3 (insulin-like peptide 3) mRNA, Response Site: Not reported)	LOEL (150 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet / 45 nM diet / 150 nM diet	Behavior (Feeding behavior-Food consumption, Response Site: Not reported)	NR (15-150 nM diet)	Behavioral	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet / 45 nM diet / 150 nM diet	Cellular (Genetics-Insulin-like peptide 5 mRNA, Response Site: Not reported)	LOEL (150 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270

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84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet / 45 nM diet / 150 nM diet	Cellular (Genetics-Insulin-like peptide 6 mRNA, Response Site: Not reported)	LOEL (150 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet / 45 nM diet / 150 nM diet	Behavior (Feeding behavior-Feeding time, Response Site: Not reported)	LOEL (15 nM diet)	Behavioral	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Cellular (Genetics-Nuclear hormone receptor HR96 mRNA, Response Site: Not reported)	LOEL (15 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Mortality (Mortality-Survival, Response Site: Not reported)	NR (15 nM diet)	Mortality	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Cellular (Genetics-Probable cytochrome P450 9f2 mRNA, Response Site: Not reported)	NOEL (15 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270

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84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Cellular (Genetics-Insulin-like peptide 6 mRNA, Response Site: Not reported)	NOEL (15 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Cellular (Genetics-Insulin receptor mRNA, Response Site: Not reported)	NOEL (15 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Biochemical (Biochemistry-Lipid, Response Site: Not reported)	NOEL (15 nM diet)	Nutritional and Metabolic	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Biochemical (Biochemistry-Glycogen, Response Site: Whole organism)	NOEL (15 nM diet)	Nutritional and Metabolic	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Biochemical (Biochemistry-Glucose, Response Site: Hemolymph)	NOEL (15 nM diet)	Nutritional and Metabolic	Medium	3350270

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84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Cellular (Genetics-Spineless mRNA, Response Site: Not reported)	LOEL (15 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	NA Larva to adult, (NA Larva to adult)	*Drosophila melanogaster* (Fruit Fly), Larva, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Cellular (Genetics-Probable cytochrome P450 9f2 mRNA, Response Site: Not reported)	LOEL (15 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	5-7 Day(s), (5-7 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Days post-emergence, Male, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Cellular (Genetics-Insulin receptor mRNA, Response Site: Not reported)	NOEL (15 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	5-7 Day(s), (5-7 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Days post-emergence, Male, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Cellular (Genetics-Insulin-like peptide 2 mRNA, Response Site: Not reported)	LOEL (15 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	5-7 Day(s), (NA (5-7) Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Days post-emergence, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Cellular (Genetics-Spineless mRNA, Response Site: Not reported)	NOEL (15 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270

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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
84-74-2	5-7 Day(s), (5-7 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Days post-emergence, Male, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Cellular (Genetics-Eukaryotic translation initiation factor 4E-binding protein 2 mRNA, Response Site: Not reported)	LOEL (15 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	5-7 Day(s), (5-7 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Days post-emergence, Male, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Cellular (Genetics-Insulin-like peptide 6 mRNA, Response Site: Not reported)	NOEL (15 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	5-7 Day(s), (NA (5-7) Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Days post-emergence, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Cellular (Genetics-Multidrug-Resistance like Protein 1 mRNA, Response Site: Not reported)	LOEL (15 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	5-7 Day(s), (NA (5-7) Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Days post-emergence, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Cellular (Genetics-Nuclear hormone receptor HR96 mRNA, Response Site: Not reported)	LOEL (15 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270

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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
84-74-2	5-7 Day(s), (NA (5-7) Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Days post-emergence, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Cellular (Genetics-Probable cytochrome P450 9f2 mRNA, Response Site: Not reported)	LOEL (15 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	5-7 Day(s), (5-7 Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Days post-emergence, Male, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Cellular (Genetics-Adipokinetic hormone mRNA, Response Site: Not reported)	NOEL (15 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	5-7 Day(s), (NA (5-7) Day(s))	*Drosophila melanogaster* (Fruit Fly), Adult, <1 Days post-emergence, Not Reported, Laboratory (BLOOMINGTON STOCK CENTER)	No substrate, Oral (diet, drink, gavage), Food, NA Male organisms	Unmeasured	0 nM diet / 15 nM diet	Cellular (Genetics-Multidrug resistance 50 mRNA, Response Site: Not reported)	LOEL (15 nM diet)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function	Medium	3350270
84-74-2	31.9 (28.7-35.4) Minute(s), (86.4 Minute(s))	*Eutrombicula hirsti* (Scrub-itch Mite), Larva, 7-10 Day(s), Not Reported, Laboratory (COLONY ESTABLISHED FROM LARVAE COLLECTED AT COWLEY BEACH, NEAR INNISFAIL, NORTHERN QUEENSLAND, AUSTRALIA)	Fabric or similar material, Environmental, Environmental, unspecified, Not Reported	Unmeasured	2.70 mg/cm2 / 5.19 mg/cm2	Physiology (Intoxication-Knockdown, Response Site: Not reported)	ET50 (2.70 mg/cm2)	Behavioral	Uninformative	1341925

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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
84-74-2	27.8 (25.1-30.9) Minute(s), (86.4 Minute(s))	*Eutrombicula hirsti* (Scrub-itch Mite), Larva, 7-10 Day(s), Not Reported, Laboratory (COLONY ESTABLISHED FROM LARVAE COLLECTED AT COWLEY BEACH, NEAR INNISFAIL, NORTHERN QUEENSLAND, AUSTRALIA)	Fabric or similar material, Environmental, Environmental, unspecified, Not Reported	Unmeasured	2.70 mg/cm2 / 5.19 mg/cm2	Physiology (Intoxication-Knockdown, Response Site: Not reported)	ET50 (5.19 mg/cm2)	Behavioral	Uninformative	1341925
84-74-2	<=10 Minute(s), (<=10 Minute(s))	*Eutrombicula hirsti* (Scrub-itch Mite), Larva, Not Reported, Laboratory (COLONY ESTABLISHED FROM LARVAE COLLECTED AT COWLEY BEACH, NEAR INNISFAIL, NORTHERN QUEENSLAND, AUSTRALIA)	Filter paper, Environmental, Environmental, unspecified, Not Reported	Unmeasured	NR / NR	Multiple (Multiple-Multiple effects reported as one result, Response Site: Not reported)	ED50 (>7.21 mg/cm2)	Behavioral	Uninformative	1341925
84-74-2	70.1 (56.8-86.4) Minute(s), (86.4 Minute(s))	*Eutrombicula hirsti* (Scrub-itch Mite), Larva, 7-10 Day(s), Not Reported, Laboratory (COLONY ESTABLISHED FROM LARVAE COLLECTED AT COWLEY BEACH, NEAR INNISFAIL, NORTHERN QUEENSLAND, AUSTRALIA)	Fabric or similar material, Environmental, Environmental, unspecified, Not Reported	Unmeasured	2.70 mg/cm2 / 5.19 mg/cm2	Physiology (Intoxication-Knockdown, Response Site: Not reported)	ET95 (2.70 mg/cm2)	Behavioral	Uninformative	1341925

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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
84-74-2	62.7 (51.1-77.1) Minute(s), (86.4 Minute(s))	*Eutrombicula hirsti* (Scrub-itch Mite), Larva, 7-10 Day(s), Not Reported, Laboratory (COLONY ESTABLISHED FROM LARVAE COLLECTED AT COWLEY BEACH, NEAR INNISFAIL, NORTHERN QUEENSLAND, AUSTRALIA)	Fabric or similar material, Environmental, Environmental, unspecified, Not Reported	Unmeasured	2.70 mg/cm2 / 5.19 mg/cm2	Physiology (Intoxication-Knockdown, Response Site: Not reported)	ET95 (5.19 mg/cm2)	Behavioral	Uninformative	1341925
84-74-2	1 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 / 1 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 25 mg/kg dry soil	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-LETH (25 mg/kg dry soil)	Mortality	Medium	789786
84-74-2	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 / 50 mg/kg dry soil / 100 mg/kg dry soil / 200 mg/kg dry soil / 300 mg/kg dry soil / 500 mg/kg dry soil	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (438 (380-504) mg/kg dry soil)	Mortality	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
84-74-2	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 / 100 mg/kg dry soil / 250 mg/kg dry soil / 500 mg/kg dry soil / 750 mg/kg dry soil / 1000 mg/kg dry soil	Mortality (Mortality-Mortality, Response Site: Not reported)	LC10 (33 mg/kg dry soil)	Mortality	Medium	789786
84-74-2	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 / 100 mg/kg dry soil / 250 mg/kg dry soil / 500 mg/kg dry soil / 750 mg/kg dry soil / 1000 mg/kg dry soil	Reproduction (Reproduction-Reproduction, general, Response Site: Not reported)	EC50 (68 (48-185) mg/kg dry soil)	Reproductive/Teratogenic	Medium	789786
84-74-2	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 / 100 mg/kg dry soil / 250 mg/kg dry soil / 500 mg/kg dry soil / 750 mg/kg dry soil / 1000 mg/kg dry soil	Reproduction (Reproduction-Reproduction, general, Response Site: Not reported)	EC10 (14 (10-46) mg/kg dry soil)	Reproductive/Teratogenic	Medium	789786
84-74-2	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 / 50 mg/kg dry soil / 100 mg/kg dry soil / 200 mg/kg dry soil / 300 mg/kg dry soil / 500 mg/kg dry soil	Reproduction (Reproduction-Reproduction, general, Response Site: Not reported)	EC10 (30.4 (9.1-87.3) mg/kg dry soil)	Reproductive/Teratogenic	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
84-74-2	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, 12 Juvenile	Unmeasured	0 mg/kg dry soil / 1 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 25 mg/kg dry soil	Growth (Development-Molting, Response Site: Not reported)	LOEL (1 mg/kg dry soil)	Development/Growth	Medium	789786
84-74-2	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 / 1 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 25 mg/kg dry soil	Mortality (Mortality-Mortality, Response Site: Not reported)	LC10 (11.3 mg/kg dry soil)	Mortality	Medium	789786
84-74-2	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 / 50 mg/kg dry soil / 100 mg/kg dry soil / 200 mg/kg dry soil / 300 mg/kg dry soil / 500 mg/kg dry soil	Reproduction (Reproduction-Reproduction, general, Response Site: Not reported)	EC10 (13.9 (6.0-161) mg/kg dry soil)	Reproductive/Teratogenic	Medium	789786
84-74-2	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 / 1 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 25 mg/kg dry soil	Growth (Development-Molting, Response Site: Not reported)	EC50 (>10 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
84-74-2	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 / 1 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 25 mg/kg dry soil	Growth (Development-Molting, Response Site: Not reported)	EC10 (0.5 (0.36-6.2) mg/kg dry soil)	Development/Growth	Medium	789786
84-74-2	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 / 100 mg/kg dry soil / 250 mg/kg dry soil / 500 mg/kg dry soil / 750 mg/kg dry soil / 1000 mg/kg dry soil	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (305 mg/kg dry soil)	Mortality	Medium	789786
84-74-2	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 / 50 mg/kg dry soil / 100 mg/kg dry soil / 200 mg/kg dry soil / 300 mg/kg dry soil / 500 mg/kg dry soil	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (>500 mg/kg dry soil)	Mortality	Medium	789786
84-74-2	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 / 1 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 25 mg/kg dry soil	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (19.4 mg/kg dry soil)	Mortality	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
84-74-2	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 / 50 mg/kg dry soil / 100 mg/kg dry soil / 200 mg/kg dry soil / 300 mg/kg dry soil / 500 mg/kg dry soil	Mortality (Mortality-Mortality, Response Site: Not reported)	LC10 (33.7 (8.2-66.5) mg/kg dry soil)	Mortality	Medium	789786
84-74-2	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 / 50 mg/kg dry soil / 100 mg/kg dry soil / 200 mg/kg dry soil / 300 mg/kg dry soil / 500 mg/kg dry soil	Reproduction (Reproduction-Reproduction, general, Response Site: Not reported)	EC10 (61 mg/kg dry soil)	Reproductive/Teratogenic	Medium	789786
84-74-2	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 / 50 mg/kg dry soil / 100 mg/kg dry soil / 200 mg/kg dry soil / 300 mg/kg dry soil / 500 mg/kg dry soil	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (362 (254-605) mg/kg dry soil)	Mortality	Medium	789786
84-74-2	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 / 50 mg/kg dry soil / 100 mg/kg dry soil / 200 mg/kg dry soil / 300 mg/kg dry soil / 500 mg/kg dry soil	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (277 (177-440) mg/kg dry soil)	Mortality	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
84-74-2	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 / 50 mg/kg dry soil / 100 mg/kg dry soil / 200 mg/kg dry soil / 300 mg/kg dry soil / 500 mg/kg dry soil	Mortality (Mortality-Mortality, Response Site: Not reported)	LC10 (>500 mg/kg dry soil)	Mortality	Medium	789786
84-74-2	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 / 50 mg/kg dry soil / 100 mg/kg dry soil / 200 mg/kg dry soil / 300 mg/kg dry soil / 500 mg/kg dry soil	Reproduction (Reproduction-Reproduction, general, Response Site: Not reported)	EC50 (125 mg/kg dry soil)	Reproductive/Teratogenic	Medium	789786
84-74-2	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 / 50 mg/kg dry soil / 100 mg/kg dry soil / 200 mg/kg dry soil / 300 mg/kg dry soil / 500 mg/kg dry soil	Mortality (Mortality-Mortality, Response Site: Not reported)	LC10 (29.5 (4.9-61.3) mg/kg dry soil)	Mortality	Medium	789786
84-74-2	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 / 50 mg/kg dry soil / 100 mg/kg dry soil / 200 mg/kg dry soil / 300 mg/kg dry soil / 500 mg/kg dry soil	Reproduction (Reproduction-Reproduction, general, Response Site: Not reported)	EC10 (50 mg/kg dry soil)	Reproductive/Teratogenic	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
84-74-2	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 / 50 mg/kg dry soil / 100 mg/kg dry soil / 200 mg/kg dry soil / 300 mg/kg dry soil / 500 mg/kg dry soil	Mortality (Mortality-Mortality, Response Site: Not reported)	LC10 (268 (193-318) mg/kg dry soil)	Mortality	Medium	789786
84-74-2	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 / 50 mg/kg dry soil / 100 mg/kg dry soil / 200 mg/kg dry soil / 300 mg/kg dry soil / 500 mg/kg dry soil	Reproduction (Reproduction-Reproduction, general, Response Site: Not reported)	EC50 (84.2 (5.1-96) mg/kg dry soil)	Reproductive/Teratogenic	Medium	789786
84-74-2	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 / 50 mg/kg dry soil / 100 mg/kg dry soil / 200 mg/kg dry soil / 300 mg/kg dry soil / 500 mg/kg dry soil	Reproduction (Reproduction-Reproduction, general, Response Site: Not reported)	EC50 (583 (138-1027) mg/kg dry soil)	Reproductive/Teratogenic	Medium	789786
84-74-2	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 / 50 mg/kg dry soil / 100 mg/kg dry soil / 200 mg/kg dry soil / 300 mg/kg dry soil / 500 mg/kg dry soil	Reproduction (Reproduction-Reproduction, general, Response Site: Not reported)	EC50 (245 (133-335) mg/kg dry soil)	Reproductive/Teratogenic	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
84-74-2	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 / 50 mg/kg dry soil / 100 mg/kg dry soil / 200 mg/kg dry soil / 300 mg/kg dry soil / 500 mg/kg dry soil	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (473 (414-564) mg/kg dry soil)	Mortality	Medium	789786
84-74-2	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 / 50 mg/kg dry soil / 100 mg/kg dry soil / 200 mg/kg dry soil / 300 mg/kg dry soil / 500 mg/kg dry soil	Reproduction (Reproduction-Reproduction, general, Response Site: Not reported)	EC50 (107 (73-171) mg/kg dry soil)	Reproductive/Teratogenic	Medium	789786
84-74-2	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 / 50 mg/kg dry soil / 100 mg/kg dry soil / 200 mg/kg dry soil / 300 mg/kg dry soil / 500 mg/kg dry soil	Mortality (Mortality-Mortality, Response Site: Not reported)	LC10 (266 (175-320) mg/kg dry soil)	Mortality	Medium	789786
84-74-2	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 / 50 mg/kg dry soil / 100 mg/kg dry soil / 200 mg/kg dry soil / 300 mg/kg dry soil / 500 mg/kg dry soil	Reproduction (Reproduction-Reproduction, general, Response Site: Not reported)	EC10 (131 (49-255) mg/kg dry soil)	Reproductive/Teratogenic	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
84-74-2	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 / 1 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 25 mg/kg dry soil	Growth (Growth-Length, Response Site: Whole organism)	EC50 (>10 mg/kg dry soil)	Development/Growth	Medium	789786
84-74-2	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 / 1 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 25 mg/kg dry soil	Growth (Growth-Length, Response Site: Whole organism)	EC10 (>10 mg/kg dry soil)	Development/Growth	Medium	789786
84-74-2	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

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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
84-74-2	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
84-74-2	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)	NOEL (2000 ng/ul)	ADME (biotransformation)	Medium	2347468
84-74-2	3-5 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)	NR (2000 ng/ul)	ADME (biotransformation)	Medium	2347468

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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
84-74-2	2 Generation, (2 Generation)	*Spodoptera frugiperda* (Fall Armyworm), Larva (Measured in: female, 2nd generation), Not Reported, Laboratory (LABORATORY OF PEST CONTROL AND INSECTS MAINTENANCE OF THE UNIVERSITY OF CAXIAS DO SUL, BRAZIL)	No substrate, Oral (diet, drink, gavage), Food, NA female, 2nd generation	Unmeasured	0 mg/g diet / 1 mg/g diet	Accumulation (Accumulation-Residue, Response Site: Whole organism)	LOEL (1 mg/g diet)	ADME (biotransformation)	Uninformative	2219889
84-74-2	1 Generation, (2 Generation)	*Spodoptera frugiperda* (Fall Armyworm), Larva (Measured in: female, 1st generation), Not Reported, Laboratory (LABORATORY OF PEST CONTROL AND INSECTS MAINTENANCE OF THE UNIVERSITY OF CAXIAS DO SUL, BRAZIL)	No substrate, Oral (diet, drink, gavage), Food, NA female, 1st generation	Unmeasured	0 mg/g diet / 1 mg/g diet	Accumulation (Accumulation-Residue, Response Site: Whole organism)	LOEL (1 mg/g diet)	ADME (biotransformation)	Uninformative	2219889

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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
84-74-2	1 Generation, (2 Generation)	*Spodoptera frugiperda* (Fall Armyworm), Larva (Measured in: male, 1st generation), Not Reported, Laboratory (LABORATORY OF PEST CONTROL AND INSECTS MAINTENANCE OF THE UNIVERSITY OF CAXIAS DO SUL, BRAZIL)	No substrate, Oral (diet, drink, gavage), Food, NA male, 1st generation	Unmeasured	0 mg/g diet / 1 mg/g diet	Accumulation (Accumulation-Residue, Response Site: Whole organism)	LOEL (1 mg/g diet)	ADME (biotransformation)	Uninformative	2219889
84-74-2	1 Generation, (2 Generation)	*Spodoptera frugiperda* (Fall Armyworm), Larva (Measured in: F0 generation), Not Reported, Laboratory (LABORATORY OF PEST CONTROL AND INSECTS MAINTENANCE OF THE UNIVERSITY OF CAXIAS DO SUL, BRAZIL)	No substrate, Oral (diet, drink, gavage), Food, NA F0 generation	Unmeasured	0 mg/g diet / 1 mg/g diet	Growth (Growth-Length, Response Site: Whole organism)	LOEL (1 mg/g diet)	Development/Growth	Uninformative	2219889

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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
84-74-2	1 Generation, (2 Generation)	*Spodoptera frugiperda* (Fall Armyworm), Larva (Measured in: F0 generation), Not Reported, Laboratory (LABORATORY OF PEST CONTROL AND INSECTS MAINTENANCE OF THE UNIVERSITY OF CAXIAS DO SUL, BRAZIL)	No substrate, Oral (diet, drink, gavage), Food, NA F0 generation	Unmeasured	0 mg/g diet / 1 mg/g diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEL (1 mg/g diet)	Development/Growth	Uninformative	2219889
84-74-2	1 Generation, (2 Generation)	*Spodoptera frugiperda* (Fall Armyworm), Larva (Measured in: F0 generation), Not Reported, Laboratory (LABORATORY OF PEST CONTROL AND INSECTS MAINTENANCE OF THE UNIVERSITY OF CAXIAS DO SUL, BRAZIL)	No substrate, Oral (diet, drink, gavage), Food, NA F0 generation	Unmeasured	0 mg/g diet / 1 mg/g diet	Growth (Growth-Width, Response Site: Whole organism)	LOEL (1 mg/g diet)	Development/Growth	Uninformative	2219889

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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
84-74-2	2 Generation, (2 Generation)	*Spodoptera frugiperda* (Fall Armyworm), Larva (Measured in: male, 2nd generation), Not Reported, Laboratory (LABORATORY OF PEST CONTROL AND INSECTS MAINTENANCE OF THE UNIVERSITY OF CAXIAS DO SUL, BRAZIL)	No substrate, Oral (diet, drink, gavage), Food, NA male, 2nd generation	Unmeasured	0 mg/g diet / 1 mg/g diet	Accumulation (Accumulation-Residue, Response Site: Whole organism)	LOEL (1 mg/g diet)	ADME (biotransformation)	Uninformative	2219889
84-74-2	2 Generation, (2 Generation)	*Spodoptera frugiperda* (Fall Armyworm), Larva (Measured in: F1 generation), Not Reported, Laboratory (LABORATORY OF PEST CONTROL AND INSECTS MAINTENANCE OF THE UNIVERSITY OF CAXIAS DO SUL, BRAZIL)	No substrate, Oral (diet, drink, gavage), Food, NA F1 generation	Unmeasured	0 mg/g diet / 1 mg/g diet	Growth (Growth-Length, Response Site: Whole organism)	LOEL (1 mg/g diet)	Development/Growth	Uninformative	2219889

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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
84-74-2	2 Generation, (2 Generation)	*Spodoptera frugiperda* (Fall Armyworm), Larva (Measured in: F1 generation), Not Reported, Laboratory (LABORATORY OF PEST CONTROL AND INSECTS MAINTENANCE OF THE UNIVERSITY OF CAXIAS DO SUL, BRAZIL)	No substrate, Oral (diet, drink, gavage), Food, NA F1 generation	Unmeasured	0 mg/g diet / 1 mg/g diet	Growth (Growth-Weight, Response Site: Whole organism)	LOEL (1 mg/g diet)	Development/Growth	Uninformative	2219889
84-74-2	2 Generation, (2 Generation)	*Spodoptera frugiperda* (Fall Armyworm), Larva (Measured in: F1 generation), Not Reported, Laboratory (LABORATORY OF PEST CONTROL AND INSECTS MAINTENANCE OF THE UNIVERSITY OF CAXIAS DO SUL, BRAZIL)	No substrate, Oral (diet, drink, gavage), Food, NA F1 generation	Unmeasured	0 mg/g diet / 1 mg/g diet	Growth (Growth-Width, Response Site: Whole organism)	LOEL (1 mg/g diet)	Development/Growth	Uninformative	2219889

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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
84-74-2	1 Generation, (2 Generation)	*Spodoptera frugiperda* (Fall Armyworm), Larva (Measured in: F0 generation), Not Reported, Laboratory (LABORATORY OF PEST CONTROL AND INSECTS MAINTENANCE OF THE UNIVERSITY OF CAXIAS DO SUL, BRAZIL)	No substrate, Oral (diet, drink, gavage), Food, NA F0 generation	Unmeasured	0 mg/g diet / 1 mg/g diet	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (1 mg/g diet)	Mortality	Uninformative	2219889
84-74-2	24 Hour(s), (24 Hour(s))	*Tyrophagus putrescentiae* (Copra Mite), Adult, 7-10 Day(s), Not Reported, Laboratory (LAB CULTURE)	No substrate, Environmental, Fumigation, 106 Organism	Unmeasured	2 mg/5 cm dia	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (2 mg/5 cm dia)	Mortality	Medium	1323221
84-74-2	24 Hour(s), (24 Hour(s))	*Tyrophagus putrescentiae* (Copra Mite), Adult, 7-10 Day(s), Not Reported, Laboratory (LAB CULTURE)	No substrate, Environmental, Fumigation, 110 Organism	Unmeasured	2 mg/5 cm dia	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (2 mg/5 cm dia)	Mortality	Medium	1323221
84-74-2	24 Hour(s), (24 Hour(s))	*Tyrophagus putrescentiae* (Copra Mite), Adult, 7-10 Day(s), Not Reported, Laboratory (LAB CULTURE)	Fabric or similar material, Environmental, Environmental, unspecified, 498 Organism	Unmeasured	0 ug/cm2 / 0.08 ug/cm2 / 1.6 ug/cm2 / 3.2 ug/cm2 / 6.4 ug/cm2 / 12.7 ug/cm2 / 25.5 ug/cm2 / 50.9 ug/cm2 / 101.8 ug/cm2	Mortality (Mortality-Mortality, Response Site: Not reported)	LD50 (25.23 (21.41-29.20) ug/cm2)	Mortality	Medium	1323221

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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
84-74-2	24 Hour(s), (24 Hour(s))	*Tyrophagus putrescentiae* (Copra Mite), Adult, 7-10 Day(s), Not Reported, Laboratory (LAB CULTURE)	No substrate, Environmental, Fumigation, 150 Organism	Unmeasured	NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LD50 (>200 mg/5 cm dia)	Mortality	Medium	1323221

* 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
84-74-2	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 / 2.9 ug/cm2 lf	Physiology (Injury-Chlorosis, Response Site: Leaf/needle)	NR (2.9 ug/cm2 lf)	Skin and Connective Tissue	Medium	9430481
84-74-2	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 / 2.9 ug/cm2 lf	Biochemical (Biochemistry-Chlorophyll, Response Site: Leaf/needle)	NR (2.9 ug/cm2 lf)	Mechanistic: Photosynthesis	Medium	9430481
84-74-2	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 / 2.9 ug/cm2 lf	Accumulation (Accumulation-Residue, Response Site: Whole organism)	NR (2.9 ug/cm2 lf)	ADME (biotransformation)	Medium	9430481
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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)	NR (5-500 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	24 Hour(s), (24 Hour(s))	*Avena sativa* (Common Oat), Not intact, Not Reported, Laboratory	Aqueous, In Vitro, In Vitro, 15 Organism	Unmeasured	0 ppm / 1 ppm / 10 ppm / 100 ppm	Growth (Morphology-Length, Response Site: Coleoptile)	NR (1-100 ppm)	Development/Growth	Low	5551990

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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
84-74-2	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	0.14260 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 (20 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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 (20 mg/kg soil)	Development/Growth	High	2915866
84-74-2	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	0.14260 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

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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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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 (100 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
84-74-2	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	0.14260 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 (100 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
84-74-2	30 Day(s), (30 Day(s))	*Brassica napus* (Rapeseed), Seedling, Not Reported, Laboratory (ZS-DSL FLOWER MARKET CO., LTD., BEIJING, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Measured	>0-1.71 mg/kg dry soil / >0-<50 mg/kg dry soil / >0-<200 mg/kg dry soil / >0-<500 mg/kg dry soil	Growth (Growth-Weight, Response Site: Whole organism)	LOEL (~0-<50 mg/kg dry soil)	Development/Growth	Medium	4829418
84-74-2	30 Day(s), (30 Day(s))	*Brassica napus* (Rapeseed), Seedling, Not Reported, Laboratory (ZS-DSL FLOWER MARKET CO., LTD., BEIJING, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Measured	>0-1.71 mg/kg dry soil / >0-<50 mg/kg dry soil / >0-<200 mg/kg dry soil / >0-<500 mg/kg dry soil	Growth (Growth-Height, Response Site: Whole organism)	LOEL (~0-<50 mg/kg dry soil)	Development/Growth	Medium	4829418
84-74-2	30 Day(s), (30 Day(s))	*Brassica napus* (Rapeseed), Seedling, Not Reported, Laboratory (ZS-DSL FLOWER MARKET CO., LTD., BEIJING, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Measured	>0-1.71 mg/kg dry soil / >0-<50 mg/kg dry soil / >0-<200 mg/kg dry soil / >0-<500 mg/kg dry soil	Biochemical (Biochemistry-Soluble sugar content, Response Site: Not reported)	NOEL (~0-<500 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Photosynthesis; Nutritional and Metabolic	Medium	4829418

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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
84-74-2	30 Day(s), (30 Day(s))	*Brassica napus* (Rapeseed), Seedling, Not Reported, Laboratory (ZS-DSL FLOWER MARKET CO., LTD., BEIJING, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Measured	>0-1.71 mg/kg dry soil / >0-<50 mg/kg dry soil / >0-<200 mg/kg dry soil / >0-<500 mg/kg dry soil	Biochemical (Biochemistry-Chlorophyll, Response Site: Not reported)	NOEL (~0-<500 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Photosynthesis; Nutritional and Metabolic	Medium	4829418
84-74-2	30 Day(s), (30 Day(s))	*Brassica napus* (Rapeseed), Seedling, Not Reported, Laboratory (ZS-DSL FLOWER MARKET CO., LTD., BEIJING, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Measured	>0-1.71 mg/kg dry soil / >0-<50 mg/kg dry soil / >0-<200 mg/kg dry soil / >0-<500 mg/kg dry soil	Biochemical (Biochemistry-Soluble proteins, Response Site: Not reported)	NOEL (~0-<500 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Photosynthesis; Nutritional and Metabolic	Medium	4829418
84-74-2	30 Day(s), (30 Day(s))	*Brassica napus* (Rapeseed), Seedling, Not Reported, Laboratory (ZS-DSL FLOWER MARKET CO., LTD., BEIJING, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Measured	>0-1.71 mg/kg dry soil / >0-<50 mg/kg dry soil / >0-<200 mg/kg dry soil / >0-<500 mg/kg dry soil	Accumulation (Accumulation-Residue, Response Site: Root)	NOEL (~0-<200 mg/kg dry soil)	ADME (biotransformation)	Medium	4829418
84-74-2	30 Day(s), (30 Day(s))	*Brassica napus* (Rapeseed), Seedling, Not Reported, Laboratory (ZS-DSL FLOWER MARKET CO., LTD., BEIJING, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Measured	>0-1.71 mg/kg dry soil / >0-<50 mg/kg dry soil / >0-<200 mg/kg dry soil / >0-<500 mg/kg dry soil	Accumulation (Accumulation-Residue, Response Site: Leaf/needle)	NOEL (~0-<200 mg/kg dry soil)	ADME (biotransformation)	Medium	4829418

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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
84-74-2	30 Day(s), (30 Day(s))	*Brassica napus* (Rapeseed), Seedling, Not Reported, Laboratory (ZS-DSL FLOWER MARKET CO., LTD., BEIJING, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Measured	>0-1.71 mg/kg dry soil / >0-<50 mg/kg dry soil / >0-<200 mg/kg dry soil / >0-<500 mg/kg dry soil	Biochemical (Biochemistry-Nitrate concentration (NO3-), Response Site: Not reported)	LOEL (~0-<500 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Photosynthesis; Nutritional and Metabolic	Medium	4829418
84-74-2	30 Day(s), (30 Day(s))	*Brassica napus* (Rapeseed), Seedling, Not Reported, Laboratory (ZS-DSL FLOWER MARKET CO., LTD., BEIJING, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Measured	>0-1.71 mg/kg dry soil / >0-<50 mg/kg dry soil / >0-<200 mg/kg dry soil / >0-<500 mg/kg dry soil	Accumulation (Accumulation-Residue, Response Site: Root)	LOEL (~0-<500 mg/kg dry soil)	ADME (biotransformation)	Medium	4829418
84-74-2	30 Day(s), (30 Day(s))	*Brassica napus* (Rapeseed), Seedling, Not Reported, Laboratory (ZS-DSL FLOWER MARKET CO., LTD., BEIJING, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Measured	>0-1.71 mg/kg dry soil / >0-<50 mg/kg dry soil / >0-<200 mg/kg dry soil / >0-<500 mg/kg dry soil	Accumulation (Accumulation-Residue, Response Site: Leaf/needle)	LOEL (~0-<500 mg/kg dry soil)	ADME (biotransformation)	Medium	4829418
84-74-2	30 Day(s), (30 Day(s))	*Brassica napus* (Rapeseed), Seedling, Not Reported, Laboratory (ZS-DSL FLOWER MARKET CO., LTD., BEIJING, CHINA)	Natural soil, Environmental, Environmental, unspecified, Not Reported	Measured	>0-1.71 mg/kg dry soil / >0-<50 mg/kg dry soil / >0-<200 mg/kg dry soil / >0-<500 mg/kg dry soil	Biochemical (Biochemistry-Nitrate concentration (NO3-), Response Site: Not reported)	NOEL (~0-<200 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Photosynthesis; Nutritional and Metabolic	Medium	4829418
84-74-2	2 Day(s), (15 Day(s))	*Brassica napus* (Rapeseed), Seedling, 19 Days post planting/sowing, Not Reported, Not reported	Culture, Environmental, Spray, hand, 12 Organism	Measured	0 ug/cm2 lf / 0 ug/cm2 lf / 2.4 ug/cm2 lf	Physiology (Injury-Chlorosis, Response Site: Leaf/needle)	NR (2.4 ug/cm2 lf)	Skin and Connective Tissue	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
84-74-2	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 (8.75 ug/cm2 lf)	Skin and Connective Tissue	Uninformative	9430481
84-74-2	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 (2.19 ug/cm2 lf)	Skin and Connective Tissue	Uninformative	9430481
84-74-2	15 Day(s), (15 Day(s))	*Brassica napus* (Rapeseed), Seedling, 19 Days post planting/sowing, Not Reported, Not reported	Culture, Environmental, Spray, hand, Not Reported	Measured	0 ug/cm2 lf / 0 ug/cm2 lf / 2.4 ug/cm2 lf	Accumulation (Accumulation-Residue, Response Site: Whole organism)	NR (2.4 ug/cm2 lf)	ADME (biotransformation)	Medium	9430481
84-74-2	2-3 Week(s), (16 Week(s))	*Brassica oleracea* (Cabbage), Seedling, Not Reported, Laboratory	Litter, Environmental, Fumigation, Not Reported	Measured	0 pg/L / 66000 pg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (66000 pg/L)	Mortality	Uninformative	5678863
84-74-2	4 Week(s), (16 Week(s))	*Brassica oleracea* (Cabbage), Seedling, Not Reported, Laboratory	Litter, Environmental, Fumigation, Not Reported	Measured	0 pg/L / 900 pg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (900 pg/L)	Mortality	Uninformative	5678863
84-74-2	4 Week(s), (16 Week(s))	*Brassica oleracea* (Cabbage), Seedling, Not Reported, Laboratory	Litter, Environmental, Fumigation, Not Reported	Measured	0 pg/L / 900 pg/L	Growth (Growth-Growth, general, Response Site: Not reported)	NR (900 pg/L)	Development/Growth	Uninformative	5678863
84-74-2	4 Week(s), (16 Week(s))	*Brassica oleracea* (Cabbage), Seedling, Not Reported, Laboratory	Litter, Environmental, Fumigation, Not Reported	Measured	0 pg/L / 360 pg/L	Physiology (Injury-Chlorosis, Response Site: Not reported)	NR (360 pg/L)	Mechanistic: Photosynthesis	Uninformative	5678863
84-74-2	4 Week(s), (16 Week(s))	*Brassica oleracea* (Cabbage), Seedling, Not Reported, Laboratory	Litter, Environmental, Fumigation, Not Reported	Measured	0 pg/L / 900 pg/L	Physiology (Injury-Chlorosis, Response Site: Not reported)	NR (900 pg/L)	Mechanistic: Photosynthesis	Uninformative	5678863

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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
84-74-2	4 Week(s), (16 Week(s))	*Brassica oleracea* (Cabbage), Seedling, Not Reported, Laboratory	Litter, Environmental, Fumigation, Not Reported	Measured	0 pg/L / 360 pg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (360 pg/L)	Mortality	Uninformative	5678863
84-74-2	4 Week(s), (16 Week(s))	*Brassica oleracea* (Cabbage), Seedling, Not Reported, Laboratory	Litter, Environmental, Fumigation, Not Reported	Measured	0 pg/L / 360 pg/L	Growth (Growth-Growth, general, Response Site: Not reported)	NR (360 pg/L)	Development/Growth	Uninformative	5678863
84-74-2	16 Week(s), (16 Week(s))	*Brassica oleracea* (Cabbage), Seedling, Not Reported, Laboratory	Litter, Environmental, Fumigation, Not Reported	Measured	0 pg/L / <=141 pg/L	Growth (Growth-Growth, general, Response Site: Not reported)	NR (<=141 pg/L)	Development/Growth	Uninformative	5678863
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Root)	LOEL (10 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Enzyme(s)-Glutathione S-transferase, Response Site: Root)	LOEL (10 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Biochemistry-CO2 concentration, Response Site: Cell)	LOEL (100 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Physiology (Physiology-Conductivity, Response Site: Stoma)	LOEL (10 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Enzyme(s)-Catalase, Response Site: Root)	LOEL (100 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947

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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
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Biochemistry-Fluorescence, Response Site: Leaf/needle)	LOEL (100 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Root)	LOEL (10 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Biochemistry-CO2 concentration, Response Site: Cell)	LOEL (10 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Shoot)	LOEL (100 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Biochemistry-Fluorescence, Response Site: Leaf/needle)	LOEL (10 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Growth (Growth-Biomass, Response Site: Shoot)	LOEL (10 mg/kg soil)	Development/Growth	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Biochemistry-Chlorophyll, Response Site: Leaf/needle)	LOEL (10 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Physiology (Physiology-Conductivity, Response Site: Stoma)	LOEL (100 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947

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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
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Physiology (Physiology-Net photosynthetic rate, Response Site: Leaf/needle)	NOEL (10 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Biochemistry-Chlorophyll, Response Site: Leaf/needle)	LOEL (100 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Shoot)	NR (10-100 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Cellular (Histology-Histological changes, general, Response Site: Cell)	NR (10-100 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Biochemistry-Fluorescence, Response Site: Leaf/needle)	NR (10-100 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Accumulation (Accumulation-Residue, Response Site: Root,Shoot)	NR (10-100 mg/kg soil)	ADME (biotransformation)	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Enzyme(s)-Catalase, Response Site: Shoot)	NOEL (100 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Biochemistry-Chlorophyll A:Chlorophyll B, Response Site: Leaf/needle)	NOEL (100 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947

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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
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Shoot)	LOEL (100 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Growth (Growth-Biomass, Response Site: Root)	LOEL (100 mg/kg soil)	Development/Growth	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Growth (Growth-Biomass, Response Site: Shoot)	LOEL (100 mg/kg soil)	Development/Growth	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Physiology (Physiology-Transpiration, Response Site: Leaf/needle)	NOEL (10 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Physiology (Physiology-Net photosynthetic rate, Response Site: Leaf/needle)	LOEL (100 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Enzyme(s)-Catalase, Response Site: Shoot)	LOEL (100 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Biochemistry-CO2 concentration, Response Site: Cell)	NOEL (10 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Biochemistry-Chlorophyll, Response Site: Leaf/needle)	NOEL (10 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947

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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
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Biochemistry-Fluorescence, Response Site: Leaf/needle)	NOEL (10 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Shoot)	NOEL (10 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Enzyme(s)-Catalase, Response Site: Root)	NOEL (10 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Enzyme(s)-Catalase, Response Site: Shoot)	NOEL (10 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Shoot)	NOEL (10 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Growth (Growth-Biomass, Response Site: Root)	NOEL (10 mg/kg soil)	Development/Growth	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Physiology (Physiology-Conductivity, Response Site: Stoma)	NOEL (10 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Physiology (Physiology-Transpiration, Response Site: Leaf/needle)	LOEL (100 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947

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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
84-74-2	45 Day(s), (45 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seed, Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0.19 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Biochemical (Enzyme(s)-Glutathione S-transferase, Response Site: Shoot)	LOEL (10 mg/kg soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	Medium	3070947
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-DNA topoisomerase 6 subunit B, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Disease resistance protein RPP13, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Eukaryotic elongation factor 1, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Heat shock protein 90, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Dihydrolipoyl dehydrogenase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Glutamate cysteine ligase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Glutathione S-transferase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Glutathione reductase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-UDP-D-xylose synthase 1, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-V-type proton ATPase subunit, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Xyloglucan 6-xylosyltransferase 2, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Xyloglucan endotransglucosylase/hydrolase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-beta-Glucosidase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-phenylalanine ammonia lyase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Dehydration-responsive element-binding protein 2A, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Cellular (Genetics-Abscisic acid receptor PYR1 mRNA, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Cellular (Genetics-Glutathione reductase, cytosolic mRNA, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Cellular (Genetics-Non-specific Lipid Transfer Protein mRNA, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Cellular (Genetics-Pectinesterase mRNA, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Cellular (Genetics-Xyloglucan endotransglucosylase/hydrolase mRNA, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Cellular (Genetics-alpha-Amylase mRNA, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Abscisic acid receptor PYR1, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Copper transport protein ATX1, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-UDP glucose pyrophosphorylase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Sulfate adenylyltransferase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Methylthioribulose-1-phosphate dehydratase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Glutathione synthetase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Glyceraldehyde 3-phosphate dehydrogenase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Hexosyltransferase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Cellular (Genetics-Ascorbate peroxidase mRNA, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Copper transport protein ATX1, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Abscisic acid receptor PYR1, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-ABC transporter I family member 6, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Dehydration-responsive element-binding protein 2A, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Disease resistance protein RPP13, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Protein content, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Ubiquitin-60S ribosomal protein L40, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-beta-ATP (beta-Adenosine triphosphate), Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-4-coumarate: CoA ligase-like 6, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-6-Phosphogluconate dehydrogenase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Alpha-1,4 glucan phosphorylase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Alpha-amylase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Ascorbate peroxidase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Catalase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Cellulose synthase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Chalcone synthase 3, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Chitinase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-DNA topoisomerase 6 subunit B, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Dehydroascorbate reductase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Dehydrogenase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Dihydroflavonol-4-reductase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Thaumatin-like protein, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Nonspecific lipid transfer protein, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Chitinase, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Heat shock transcription factor A4a, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Cellulose synthase, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-6-Phosphogluconate dehydrogenase, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-4-coumarate: CoA ligase-like 6, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-beta-ATP (beta-Adenosine triphosphate), Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Ubiquitin-60S ribosomal protein L40, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Thaumatin-like protein, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Heat shock protein 90, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Hydrogen peroxidase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Isocitrate dehydrogenase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Serine/threonine-protein kinase SRK2E, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Mitogen-activated protein kinases, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Cellular (Genetics-Dihydrolipoyl dehydrogenase mRNA, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Cellular (Genetics-ATP synthase subunit beta, mitochondrial mRNA, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-UDP-D-xylose synthase 1, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-UDP glucose pyrophosphorylase, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-S-adenosylmethionine synthase, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Phosphoglycerate kinase, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Phosphoglucomutase (alpha-D-glucose-1,6-bisphosphate-dependent), Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Dehydroascorbate reductase, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Pectinase activity, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Manganese superoxide dismutase (MnSOD), Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Glutamate cysteine ligase, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Hexosyltransferase, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Glutathione S-transferase, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Hydrogen peroxidase, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Manganese superoxide dismutase (MnSOD), Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Glutathione reductase, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Monodehydroascorbate reductase, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Glutathione synthetase, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Dihydroflavonol-4-reductase, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Cellular (Genetics-Glutathione reductase, cytosolic mRNA, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-beta-Glucosidase, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Cellular (Genetics-Xyloglucan endotransglucosylase/hydrolase mRNA, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Serine-Threonine protein phosphatase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Monodehydroascorbate reductase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Pectinase activity, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Pectinesterase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Phosphoglucomutase (alpha-D-glucose-1,6-bisphosphate-dependent), Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Phosphoglycerate kinase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-S-adenosylmethionine synthase, Response Site: Root)	LOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Chalcone synthase 3, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Alpha-1,4 glucan phosphorylase, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Cellular (Genetics-Pectinesterase mRNA, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Pectinesterase, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Protein, total, Response Site: Root)	NR (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Cellular (Histology-Degeneration,Histological changes, general,Vacuolization, Response Site: Root)	NR (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Cellular (Histology-Vacuolization, Response Site: Root)	NR (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Growth (Growth-Biomass,Length,Weight, Response Site: Root)	NR (25-100 mg/L)	Development/Growth	Uninformative	5043543

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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
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Cellular (Genetics-Non-specific Lipid Transfer Protein mRNA, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	15 Day(s), (15 Day(s))	*Brassica parachinensis* (False Pak-Choi), Seedling, 14 Days post germination (Measured in: Root), Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 5 Root	Unmeasured	0 mg/L / 25 mg/L / 50 mg/L / 100 mg/L	Biochemical (Enzyme(s)-Serine/threonine-protein kinase SRK2E, Response Site: Root)	NOEL (25 mg/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Cytotoxicity; Oxidative stress (including redox biology)	Uninformative	5043543
84-74-2	7 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Days post germination, Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Chlorophyll, Response Site: Leaf/needle)	LOEL (1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	Medium	1296241
84-74-2	7 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Days post germination, Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	LOEL (10 mg/L)	ADME (biotransformation)	Medium	1296241
84-74-2	7 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Days post germination, Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	NOEL (1 mg/L)	ADME (biotransformation)	Medium	1296241

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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
84-74-2	14 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Days post germination, Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	NOEL (1 mg/L)	ADME (biotransformation)	Medium	1296241
84-74-2	14 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Days post germination, Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	LOEL (10 mg/L)	ADME (biotransformation)	Medium	1296241
84-74-2	14 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Days post germination, Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Chlorophyll, Response Site: Leaf/needle)	LOEL (1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	Medium	1296241
84-74-2	21 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Days post germination, Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Chlorophyll, Response Site: Leaf/needle)	LOEL (1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	Medium	1296241
84-74-2	21 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Days post germination, Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	LOEL (10 mg/L)	ADME (biotransformation)	Medium	1296241
84-74-2	21 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Days post germination, Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	NOEL (1 mg/L)	ADME (biotransformation)	Medium	1296241

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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
84-74-2	28 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Days post germination, Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	NOEL (1 mg/L)	ADME (biotransformation)	Medium	1296241
84-74-2	28 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Days post germination, Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	LOEL (10 mg/L)	ADME (biotransformation)	Medium	1296241
84-74-2	28 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Days post germination, Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Chlorophyll, Response Site: Leaf/needle)	LOEL (1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	Medium	1296241
84-74-2	35 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Days post germination, Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	LOEL (10 mg/L)	ADME (biotransformation)	Medium	1296241
84-74-2	35 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Days post germination, Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	NOEL (1 mg/L)	ADME (biotransformation)	Medium	1296241
84-74-2	35 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Days post germination, Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Protein content, Response Site: Leaf/needle)	NR (1-100 mg/L)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	Medium	1296241

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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
84-74-2	35 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Days post germination, Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Chlorophyll, Response Site: Leaf/needle)	LOEL (1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	Medium	1296241
84-74-2	42 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Days post germination, Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 3 Organism	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Chlorophyll, Response Site: Leaf/needle)	LOEL (1 mg/L)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	Medium	1296241
84-74-2	42 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Days post germination, Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 3 Organism	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Growth (Growth-Biomass, Response Site: Whole organism)	LOEL (1 mg/L)	Development/Growth	Medium	1296241
84-74-2	42 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Days post germination, Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 3 Organism	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	LOEL (10 mg/L)	ADME (biotransformation)	Medium	1296241
84-74-2	42 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Days post germination, Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, 3 Organism	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Accumulation (Accumulation-Residue, Response Site: Whole organism)	NOEL (1 mg/L)	ADME (biotransformation)	Medium	1296241
84-74-2	42 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Days post germination, Not Reported, Laboratory (NR)	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Accumulation (Accumulation-Residue, Response Site: Leaf/needle,Root,Stem)	NR (1-100 mg/L)	ADME (biotransformation)	Medium	1296241

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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
84-74-2	35 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Day(s), Not Reported, Laboratory	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Cellular (Genetics-Genetics, general, Response Site: Leaf/needle)	NR (30 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology); Photosynthesis	Medium	1298079
84-74-2	42 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Day(s), Not Reported, Laboratory	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Accumulation (Accumulation-Residue, Response Site: Leaf/needle)	LOEL (10 mg/L)	ADME (biotransformation)	Medium	1298079
84-74-2	7-42 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Day(s), Not Reported, Laboratory	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Growth (Growth-Biomass, Response Site: Whole organism)	NR (1-100 mg/L)	Development/Growth	Medium	1298079
84-74-2	42 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Day(s), Not Reported, Laboratory	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Accumulation (Accumulation-Residue, Response Site: Leaf/needle)	NOEL (1 mg/L)	ADME (biotransformation)	Medium	1298079
84-74-2	7-42 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Day(s), Not Reported, Laboratory	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Accumulation (Accumulation-Residue, Response Site: Root,Shoot)	NR (1-100 mg/L)	ADME (biotransformation)	Medium	1298079
84-74-2	7-42 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Day(s), Not Reported, Laboratory	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Biochemical (Biochemistry-Chlorophyll, Response Site: Leaf/needle)	NR (1-100 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology); Photosynthesis	Medium	1298079

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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
84-74-2	42 Day(s), (42 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 8 Day(s), Not Reported, Laboratory	Hydroponic, Environmental, Hydroponic, Not Reported	Unmeasured	0 mg/L / 1 mg/L / 10 mg/L / 30 mg/L / 50 mg/L / 100 mg/L	Cellular (Histology-Histological changes, general, Response Site: Chloroplast)	NR (30 mg/L)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology); Photosynthesis	Medium	1298079
84-74-2	15 Day(s), (30 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 7 Days post germination, Not Reported, Laboratory (FROM MINGDA SEED SALES SHOP, NANJING, CHINA)	Natural soil, Environmental, Direct application, Not Reported	Unmeasured	0 mg/kg soil / 1.38-52.3 mg/kg soil	Accumulation (Accumulation-Residue, Response Site: Root)	NOEL (<3-52.3 mg/kg soil)	ADME (biotransformation)	Uninformative	5605728
84-74-2	15 Day(s), (30 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 7 Days post germination, Not Reported, Laboratory (FROM MINGDA SEED SALES SHOP, NANJING, CHINA)	Natural soil, Environmental, Direct application, Not Reported	Unmeasured	0 mg/kg soil / 1.38-52.3 mg/kg soil	Accumulation (Accumulation-Residue, Response Site: Shoot)	NOEL (<3-52.3 mg/kg soil)	ADME (biotransformation)	Uninformative	5605728
84-74-2	30 Day(s), (30 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 7 Days post germination, Not Reported, Laboratory (FROM MINGDA SEED SALES SHOP, NANJING, CHINA)	Natural soil, Environmental, Direct application, Not Reported	Unmeasured	0 mg/kg soil / 1.38-52.3 mg/kg soil	Accumulation (Accumulation-Residue, Response Site: Root)	NOEL (1.38-52.3 mg/kg soil)	ADME (biotransformation)	Uninformative	5605728

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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
84-74-2	30 Day(s), (30 Day(s))	*Brassica rapa ssp. chinensis* (Pak Choi), Seedling, 7 Days post germination, Not Reported, Laboratory (FROM MINGDA SEED SALES SHOP, NANJING, CHINA)	Natural soil, Environmental, Direct application, Not Reported	Unmeasured	0 mg/kg soil / 1.38-52.3 mg/kg soil	Accumulation (Accumulation-Residue, Response Site: Shoot)	NOEL (1.38-52.3 mg/kg soil)	ADME (biotransformation)	Uninformative	5605728
84-74-2	62 Day(s), (62 Day(s))	*Brassica rapa var. rapa* (Turnip), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.80 ug/m3 / 1.35 ug/m3 / 3.01 ug/m3 / 12.39 ug/m3	Growth (Growth-Biomass, Response Site: Shoot)	NOEC (0.90 (0.46-1.75) ug/m3)	Development/Growth	High	1302103
84-74-2	62 Day(s), (62 Day(s))	*Brassica rapa var. rapa* (Turnip), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.80 ug/m3 / 1.35 ug/m3 / 3.01 ug/m3 / 12.39 ug/m3	Growth (Growth-Biomass, Response Site: Whole organism)	EC10 (0.77 (0.36-1.67) ug/m3)	Development/Growth	High	1302103
84-74-2	62 Day(s), (62 Day(s))	*Brassica rapa var. rapa* (Turnip), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.80 ug/m3 / 1.35 ug/m3 / 3.01 ug/m3 / 12.39 ug/m3	Growth (Growth-Biomass, Response Site: Shoot)	EC10 (0.52 (0.17-1.63) ug/m3)	Development/Growth	High	1302103
84-74-2	62 Day(s), (62 Day(s))	*Brassica rapa var. rapa* (Turnip), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.80 ug/m3 / 1.35 ug/m3 / 3.01 ug/m3 / 12.39 ug/m3	Growth (Growth-Biomass, Response Site: Root)	EC10 (1.15 (0.51-2.58) ug/m3)	Development/Growth	High	1302103

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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
84-74-2	62 Day(s), (62 Day(s))	*Brassica rapa var. rapa* (Turnip), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.80 ug/m3 / 1.35 ug/m3 / 3.01 ug/m3 / 12.39 ug/m3	Growth (Growth-Biomass, Response Site: Root)	NOEC (1.40 (0.75-2.62) ug/m3)	Development/Growth	High	1302103
84-74-2	62 Day(s), (62 Day(s))	*Brassica rapa var. rapa* (Turnip), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.80 ug/m3 / 1.35 ug/m3 / 3.01 ug/m3 / 12.39 ug/m3	Growth (Growth-Biomass, Response Site: Whole organism)	NOEC (0.96 (0.53-1.75) ug/m3)	Development/Growth	High	1302103
84-74-2	62 Day(s), (62 Day(s))	*Brassica rapa var. rapa* (Turnip), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.80 ug/m3 / 1.35 ug/m3 / 3.01 ug/m3 / 12.39 ug/m3	Accumulation (Accumulation-Residue, Response Site: Leaf/needle)	NR (0.80-3.01 ug/m3)	ADME (biotransformation)	High	1302103
84-74-2	~6 Day(s), (~7 Day(s))	*Browallia speciosa* (Amethyst Flower), Shoot, Not Reported, Not reported	Filter paper, Environmental, Fumigation, Not Reported	Measured	0 ng/L / 10-150 ng/L	Biochemical (Biochemistry-Chlorophyll, Response Site: Leaf/needle)	NR (130 ng/L)	Mechanistic: Photosynthesis	Uninformative	1333234
84-74-2	1-7 Day(s), (~7 Day(s))	*Browallia speciosa* (Amethyst Flower), Shoot, Not Reported, Not reported	Filter paper, Environmental, Fumigation, Not Reported	Unmeasured values (some measured values reported in article)	0 ng/L / 10-150 ng/L	Physiology (Physiology-Pigmentation, Response Site: Leaf/needle)	NR (10-150 ng/L)	Mechanistic: Photosynthesis	Uninformative	1333234
84-74-2	6-7 Day(s), (~7 Day(s))	*Browallia speciosa* (Amethyst Flower), Shoot, Not Reported, Not reported	Filter paper, Environmental, Fumigation, Not Reported	Unmeasured values (some measured values reported in article)	0 ng/L / 10-150 ng/L	Biochemical (Biochemistry-Chlorophyll, Response Site: Not reported)	NR (10-150 ng/L)	Mechanistic: Photosynthesis	Uninformative	1333234

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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
84-74-2	7 Day(s), (~7 Day(s))	*Browallia speciosa* (Amethyst Flower), Shoot, Not Reported, Not reported	Filter paper, Environmental, Fumigation, Not Reported	Unmeasured values (some measured values reported in article)	0 ng/L / 10-150 ng/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (10-150 ng/L)	Mortality	Uninformative	1333234
84-74-2	4-7 Day(s), (~7 Day(s))	*Browallia speciosa* (Amethyst Flower), Shoot, Not Reported, Not reported	Filter paper, Environmental, Fumigation, Not Reported	Measured	0 ug/L / 1-4 ug/L	Cellular (Cell(s)-Cell changes, Response Site: Chloroplast)	NR (1-4 ug/L)	Mechanistic: Cytotoxicity; Photosynthesis	Uninformative	1333234
84-74-2	4-7 Day(s), (~7 Day(s))	*Browallia speciosa* (Amethyst Flower), Shoot, Not Reported, Not reported	Filter paper, Environmental, Fumigation, Not Reported	Measured	0 ug/L / 1-4 ug/L	Physiology (Physiology-Pigmentation, Response Site: Leaf/needle)	NR (1-4 ug/L)	Mechanistic: Cytotoxicity; Photosynthesis	Uninformative	1333234
84-74-2	4-7 Day(s), (~7 Day(s))	*Browallia speciosa* (Amethyst Flower), Shoot, Not Reported, Not reported	Filter paper, Environmental, Fumigation, Not Reported	Measured	0 ug/L / 1-4 ug/L	Biochemical (Biochemistry-Chlorophyll, Response Site: Chloroplast,Leaf/needle)	NR (1-4 ug/L)	Mechanistic: Cytotoxicity; Photosynthesis	Uninformative	1333234
84-74-2	3 Hour(s), (3 Hour(s))	*Carica papaya* (Papaya), Seedling, 1 Month(s), Not Reported, Laboratory	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 mg/L / 10 mg/L	Physiology (Physiology-Iron uptake, Response Site: Leaf/needle,Root,Stem)	NR (10 mg/L)	Mechanistic: Cell signaling/function; Nutritional and Metabolic	Uninformative	5433168
84-74-2	3 Day(s), (3 Day(s))	*Cucumis sativus* (Cucumber), Seedling, Not Reported, Laboratory (BURPEE SEED SO.)	Mineral soil, Topical, Surface area dose, Not Reported	Unmeasured	0 ug/org / 0.1 ug/org / 1 ug/org / 10 ug/org	Growth (Morphology-Length, Response Site: Hypocotyl)	NR (0.1-10 ug/org)	Development/Growth	Uninformative	5551990

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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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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 (20 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
84-74-2	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	0.14260 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 (500 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
84-74-2	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	0.14260 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 (100 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
84-74-2	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	0.14260 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 (500 mg/kg soil)	Development/Growth	High	2915866
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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 (100 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
84-74-2	NA Harvest, (NA Harvest)	*Cucumis sativus* (Cucumber), Seedling, 3 Leaf stage, Not Reported, Laboratory (NR)	Natural soil, Environmental, Soil slurry, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Ascorbic acid, Response Site: Not reported)	LOEL (5 mg/kg dry soil)	Mechanistic: Reproductive/Teratogenic	Medium	3502464
84-74-2	NA Harvest, (NA Harvest)	*Cucumis sativus* (Cucumber), Seedling, 3 Leaf stage, Not Reported, Laboratory (NR)	Natural soil, Environmental, Soil slurry, 5 Organism	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Accumulation (Accumulation-Residue, Response Site: Not reported)	LOEL (10 mg/kg dry soil)	ADME (biotransformation)	Medium	3502464
84-74-2	NA Harvest, (NA Harvest)	*Cucumis sativus* (Cucumber), Seedling, 3 Leaf stage, Not Reported, Laboratory (NR)	Natural soil, Environmental, Soil slurry, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Soluble proteins, Response Site: Not reported)	LOEL (10 mg/kg dry soil)	Mechanistic: Reproductive/Teratogenic	Medium	3502464
84-74-2	NA Harvest, (NA Harvest)	*Cucumis sativus* (Cucumber), Seedling, 3 Leaf stage, Not Reported, Laboratory (NR)	Natural soil, Environmental, Soil slurry, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Soluble sugar content, Response Site: Not reported)	LOEL (5 mg/kg dry soil)	Mechanistic: Reproductive/Teratogenic	Medium	3502464
84-74-2	NA Harvest, (NA Harvest)	*Cucumis sativus* (Cucumber), Seedling, 3 Leaf stage, Not Reported, Laboratory (NR)	Natural soil, Environmental, Soil slurry, 5 Organism	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Accumulation (Accumulation-Residue, Response Site: Not reported)	NOEL (5 mg/kg dry soil)	ADME (biotransformation)	Medium	3502464
84-74-2	NA Harvest, (NA Harvest)	*Cucumis sativus* (Cucumber), Seedling, 3 Leaf stage, Not Reported, Laboratory (NR)	Natural soil, Environmental, Soil slurry, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Organic acids, Response Site: Not reported)	LOEL (5 mg/kg dry soil)	Mechanistic: Reproductive/Teratogenic	Medium	3502464

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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
84-74-2	NA Harvest, (NA Harvest)	*Cucumis sativus* (Cucumber), Seedling, 3 Leaf stage, Not Reported, Laboratory (NR)	Natural soil, Environmental, Soil slurry, 5 Organism	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Accumulation (Accumulation-Accumulation, general, Response Site: Not reported)	NR (5-40 mg/kg dry soil)	ADME (biotransformation)	Medium	3502464
84-74-2	NA Harvest, (NA Harvest)	*Cucumis sativus* (Cucumber), Seedling, 3 Leaf stage, Not Reported, Laboratory (NR)	Natural soil, Environmental, Soil slurry, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 20 mg/kg dry soil / 40 mg/kg dry soil	Biochemical (Biochemistry-Soluble proteins, Response Site: Not reported)	NOEL (5 mg/kg dry soil)	Mechanistic: Reproductive/Teratogenic	Medium	3502464
84-74-2	<=5 Day(s), (5 Day(s))	*Gossypium sp.* (Cotton), Seed, Not Reported, Laboratory (XINJIANG DIVISION OF AGRICULTURE)	Filter paper, Environmental, Dipped or soaked, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 50 ug/ml / 100 ug/ml / 200 ug/ml / 400 ug/ml / 600 ug/ml / 800 ug/ml / 1000 ug/ml / 1500 ug/ml / 2000 ug/ml / 3000 ug/ml	Growth (Growth-Length, Response Site: Root)	LOEL (1500 ug/ml)	Development/Growth	Low	1639289
84-74-2	<=5 Day(s), (5 Day(s))	*Gossypium sp.* (Cotton), Seed, Not Reported, Laboratory (XINJIANG DIVISION OF AGRICULTURE)	Filter paper, Environmental, Dipped or soaked, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 50 ug/ml / 100 ug/ml / 200 ug/ml / 400 ug/ml / 600 ug/ml / 800 ug/ml / 1000 ug/ml / 1500 ug/ml / 2000 ug/ml / 3000 ug/ml	Reproduction (Reproduction-Germination, Response Site: Not reported)	LOEL (1500 ug/ml)	Reproductive/Teratogenic	Low	1639289

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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
84-74-2	<=5 Day(s), (5 Day(s))	*Gossypium sp.* (Cotton), Seed, Not Reported, Laboratory (XINJIANG DIVISION OF AGRICULTURE)	Filter paper, Environmental, Dipped or soaked, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 50 ug/ml / 100 ug/ml / 200 ug/ml / 400 ug/ml / 600 ug/ml / 800 ug/ml / 1000 ug/ml / 1500 ug/ml / 2000 ug/ml / 3000 ug/ml	Reproduction (Reproduction-Germination, Response Site: Not reported)	LOEL (3000 ug/ml)	Reproductive/Teratogenic	Low	1639289
84-74-2	<=5 Day(s), (5 Day(s))	*Gossypium sp.* (Cotton), Seed, Not Reported, Laboratory (XINJIANG DIVISION OF AGRICULTURE)	Filter paper, Environmental, Dipped or soaked, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 50 ug/ml / 100 ug/ml / 200 ug/ml / 400 ug/ml / 600 ug/ml / 800 ug/ml / 1000 ug/ml / 1500 ug/ml / 2000 ug/ml / 3000 ug/ml	Reproduction (Reproduction-Germination, Response Site: Not reported)	LOEL (2000 ug/ml)	Reproductive/Teratogenic	Low	1639289
84-74-2	<=5 Day(s), (5 Day(s))	*Gossypium sp.* (Cotton), Seed, Not Reported, Laboratory (XINJIANG DIVISION OF AGRICULTURE)	Filter paper, Environmental, Dipped or soaked, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 50 ug/ml / 100 ug/ml / 200 ug/ml / 400 ug/ml / 600 ug/ml / 800 ug/ml / 1000 ug/ml / 1500 ug/ml / 2000 ug/ml / 3000 ug/ml	Growth (Growth-Length, Response Site: Root)	NOEL (1000 ug/ml)	Development/Growth	Low	1639289

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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
84-74-2	<=5 Day(s), (5 Day(s))	*Gossypium sp.* (Cotton), Seed, Not Reported, Laboratory (XINJIANG DIVISION OF AGRICULTURE)	Filter paper, Environmental, Dipped or soaked, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 50 ug/ml / 100 ug/ml / 200 ug/ml / 400 ug/ml / 600 ug/ml / 800 ug/ml / 1000 ug/ml / 1500 ug/ml / 2000 ug/ml / 3000 ug/ml	Reproduction (Reproduction-Germination, Response Site: Not reported)	NOEL (1000 ug/ml)	Reproductive/Teratogenic	Low	1639289
84-74-2	<=5 Day(s), (5 Day(s))	*Gossypium sp.* (Cotton), Seed, Not Reported, Laboratory (XINJIANG DIVISION OF AGRICULTURE)	Filter paper, Environmental, Dipped or soaked, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 50 ug/ml / 100 ug/ml / 200 ug/ml / 400 ug/ml / 600 ug/ml / 800 ug/ml / 1000 ug/ml / 1500 ug/ml / 2000 ug/ml / 3000 ug/ml	Reproduction (Reproduction-Germination, Response Site: Not reported)	NOEL (1500 ug/ml)	Reproductive/Teratogenic	Low	1639289
84-74-2	<=5 Day(s), (5 Day(s))	*Gossypium sp.* (Cotton), Seed, Not Reported, Laboratory (XINJIANG DIVISION OF AGRICULTURE)	Filter paper, Environmental, Dipped or soaked, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 50 ug/ml / 100 ug/ml / 200 ug/ml / 400 ug/ml / 600 ug/ml / 800 ug/ml / 1000 ug/ml / 1500 ug/ml / 2000 ug/ml / 3000 ug/ml	Reproduction (Reproduction-Germination, Response Site: Not reported)	NOEL (2000 ug/ml)	Reproductive/Teratogenic	Low	1639289

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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
84-74-2	<=5 Day(s), (5 Day(s))	*Gossypium sp.* (Cotton), Seed, Not Reported, Laboratory (XINJIANG DIVISION OF AGRICULTURE)	Filter paper, Environmental, Dipped or soaked, Not Reported	Unmeasured	0 ug/ml / 0 ug/ml / 50 ug/ml / 100 ug/ml / 200 ug/ml / 400 ug/ml / 600 ug/ml / 800 ug/ml / 1000 ug/ml / 1500 ug/ml / 2000 ug/ml / 3000 ug/ml	Growth (Growth-Vigor, Response Site: Not reported)	NR (50-3000 ug/ml)	Development/Growth	Low	1639289
84-74-2	62 Day(s), (62 Day(s))	*Holcus lanatus* (Velvetgrass), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.80 ug/m3 / 1.35 ug/m3 / 3.01 ug/m3 / 12.39 ug/m3	Growth (Growth-Biomass, Response Site: Whole organism)	EC10 (8.79 ug/m3)	Development/Growth	High	1302103
84-74-2	62 Day(s), (62 Day(s))	*Holcus lanatus* (Velvetgrass), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.80 ug/m3 / 1.35 ug/m3 / 3.01 ug/m3 / 12.39 ug/m3	Growth (Growth-Biomass, Response Site: Root)	EC10 (8.83 ug/m3)	Development/Growth	High	1302103
84-74-2	62 Day(s), (62 Day(s))	*Holcus lanatus* (Velvetgrass), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.80 ug/m3 / 1.35 ug/m3 / 3.01 ug/m3 / 12.39 ug/m3	Accumulation (Accumulation-Residue, Response Site: Leaf/needle)	NR (1.35-3.01 ug/m3)	ADME (biotransformation)	High	1302103
84-74-2	62 Day(s), (62 Day(s))	*Holcus lanatus* (Velvetgrass), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.80 ug/m3 / 1.35 ug/m3 / 3.01 ug/m3 / 12.39 ug/m3	Growth (Growth-Biomass, Response Site: Shoot)	EC10 (10.28 ug/m3)	Development/Growth	High	1302103

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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
84-74-2	NA Day(s), (Not Reported)	*Hordeum vulgare* (Barley), Not intact, Not Reported, Laboratory	Culture, In Vitro, In Vitro, Not Reported	Unmeasured	0 M / 0.001 M / 0.0001 M / 0.00001 M / 0.000001 M	Physiology (Physiology-Photosynthesis, Response Site: Not reported)	IC50 (0.0002 M)	Mechanistic: Photosynthesis	Medium	1333016
84-74-2	NA Day(s), (Not Reported)	*Hordeum vulgare* (Barley), Not intact, Not Reported, Laboratory	Culture, In Vitro, In Vitro, Not Reported	Unmeasured	0 M / 0.001 M / 0.0001 M / 0.00001 M / 0.000001 M	Physiology (Physiology-CO2 Fixation, Response Site: Not reported)	IC50 (0.0002 M)	Mechanistic: Photosynthesis	Medium	1333016
84-74-2	7 Day(s), (7 Day(s))	*Leptochloa chinensis* (Chinese Sprangletop), Seed, Not Reported, Wild (COLLECTED FROM RICE FIELDS OF PASIR MAS KELANTAN, MALAYSIA)	Filter paper, Environmental, Culture medium, Not Reported	Unmeasured	0 mg/L / 500 mg/L	Reproduction (Reproduction-Germination, Response Site: Not reported)	NR (500 mg/L)	Reproductive/Teratogenic	Uninformative	5432995
84-74-2	14 Day(s), (14 Day(s))	*Leptochloa chinensis* (Chinese Sprangletop), Seed, Not Reported, Wild (COLLECTED FROM RICE FIELDS OF PASIR MAS KELANTAN, MALAYSIA)	Mineral soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 AI kg/ha / 1.2 AI kg/ha / 2.4 AI kg/ha / 4.8 AI kg/ha	Growth (Development-Emergence, Response Site: Not reported)	NR (1.2-4.8 AI kg/ha)	Development/Growth	Medium	5432995
84-74-2	14 Day(s), (14 Day(s))	*Leptochloa chinensis* (Chinese Sprangletop), Seed, Not Reported, Wild (COLLECTED FROM RICE FIELDS OF PASIR MAS KELANTAN, MALAYSIA)	Mineral soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 AI kg/ha / 1.2 AI kg/ha / 2.4 AI kg/ha / 4.8 AI kg/ha	Growth (Growth-Weight, Response Site: Shoot)	NR (1.2-4.8 AI kg/ha)	Development/Growth	Medium	5432995

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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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	3 Day(s), (7 Day(s))	*Nicotiana tabacum* (Tobacco), Seed, Not Reported, Laboratory	Filter paper, Environmental, Direct application, Not Reported	Unmeasured	0.0 mmol/L / 0.01 mmol/L / 0.1 mmol/L / 0.5 mmol/L / 1.0 mmol/L / 5.0 mmol/L / 10.0 mmol/L	Reproduction (Reproduction-Germination, Response Site: Not reported)	NOEL (0.5 mmol/L)	Reproductive/Teratogenic	High	5627041
84-74-2	3 Day(s), (7 Day(s))	*Nicotiana tabacum* (Tobacco), Seed, Not Reported, Laboratory	Filter paper, Environmental, Direct application, Not Reported	Unmeasured	0.0 mmol/L / 0.01 mmol/L / 0.1 mmol/L / 0.5 mmol/L / 1.0 mmol/L / 5.0 mmol/L / 10.0 mmol/L	Reproduction (Reproduction-Germination, Response Site: Not reported)	LOEL (1.0 mmol/L)	Reproductive/Teratogenic	High	5627041
84-74-2	7 Day(s), (7 Day(s))	*Nicotiana tabacum* (Tobacco), Seed, Not Reported, Laboratory	Filter paper, Environmental, Direct application, Not Reported	Unmeasured	0.0 mmol/L / 0.01 mmol/L / 0.1 mmol/L / 0.5 mmol/L / 1.0 mmol/L / 5.0 mmol/L / 10.0 mmol/L	Growth (Growth-Vigor, Response Site: Not reported)	NR (0.01-10.0 mmol/L)	Development/Growth	High	5627041

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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
84-74-2	7 Day(s), (7 Day(s))	*Nicotiana tabacum* (Tobacco), Seed, Not Reported, Laboratory	Filter paper, Environmental, Direct application, Not Reported	Unmeasured	0.0 mmol/L / 0.01 mmol/L / 0.1 mmol/L / 0.5 mmol/L / 1.0 mmol/L / 5.0 mmol/L / 10.0 mmol/L	Reproduction (Reproduction-Germination, Response Site: Not reported)	NR (0.01-10.0 mmol/L)	Reproductive/Teratogenic	High	5627041
84-74-2	7 Day(s), (7 Day(s))	*Nicotiana tabacum* (Tobacco), Seed, Not Reported, Laboratory	Filter paper, Environmental, Direct application, Not Reported	Unmeasured	0.0 mmol/L / 0.01 mmol/L / 0.1 mmol/L / 0.5 mmol/L / 1.0 mmol/L / 5.0 mmol/L / 10.0 mmol/L	Growth (Growth-Length, Response Site: Whole organism)	NR (0.01-10.0 mmol/L)	Development/Growth	High	5627041
84-74-2	7 Day(s), (7 Day(s))	*Nicotiana tabacum* (Tobacco), Seed, Not Reported, Laboratory (NR)	Filter paper, Environmental, Multiple routes within environmental exposures, Not Reported	Unmeasured	0 mM / 0.1 mM / 0.5 mM / 1.0 mM / 10 mM	Reproduction (Reproduction-Germination, Response Site: Not reported)	NOEL (0.1 mM)	Reproductive/Teratogenic	Low	792357
84-74-2	7 Day(s), (7 Day(s))	*Nicotiana tabacum* (Tobacco), Seed, Not Reported, Laboratory (NR)	Filter paper, Environmental, Multiple routes within environmental exposures, Not Reported	Unmeasured	0 mM / 0.1 mM / 0.5 mM / 1.0 mM / 10 mM	Reproduction (Reproduction-Germination, Response Site: Not reported)	LOEL (0.5 mM)	Reproductive/Teratogenic	Low	792357
84-74-2	7 Day(s), (7 Day(s))	*Nicotiana tabacum* (Tobacco), Seed, Not Reported, Laboratory (NR)	Filter paper, Environmental, Multiple routes within environmental exposures, Not Reported	Unmeasured	0 mM / 0.1 mM / 0.5 mM / 1.0 mM / 10 mM	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	NR (0.1-10 mM)	Development/Growth	Low	792357
84-74-2	14 Day(s), (14 Day(s))	*Oryza sativa* (Rice), Seed, Not Reported, Laboratory (PROVIDED BY MARDI RESEARCH STATION, SEBERANG PERAI, PENANG, MALAYSIA)	Mineral soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 AI kg/ha / 1.2 AI kg/ha / 2.4 AI kg/ha / 4.8 AI kg/ha	Growth (Growth-Height, Response Site: Shoot)	NR (1.2-4.8 AI kg/ha)	Development/Growth	Medium	5432995

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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
84-74-2	14 Day(s), (14 Day(s))	*Oryza sativa* (Rice), Seed, Not Reported, Laboratory (PROVIDED BY MARDI RESEARCH STATION, SEBERANG PERAI, PENANG, MALAYSIA)	Mineral soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 AI kg/ha / 1.2 AI kg/ha / 2.4 AI kg/ha / 4.8 AI kg/ha	Growth (Growth-Weight, Response Site: Shoot)	NR (1.2-4.8 AI kg/ha)	Development/Growth	Medium	5432995
84-74-2	14 Day(s), (14 Day(s))	*Oryza sativa* (Rice), Seed, Not Reported, Laboratory (PROVIDED BY MARDI RESEARCH STATION, SEBERANG PERAI, PENANG, MALAYSIA)	Mineral soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 AI kg/ha / 1.2 AI kg/ha / 2.4 AI kg/ha / 4.8 AI kg/ha	Growth (Growth-Length, Response Site: Root)	NR (1.2-4.8 AI kg/ha)	Development/Growth	Medium	5432995
84-74-2	5 Day(s), (5 Day(s))	*Oryza sativa* (Rice), Germinated seed, Not Reported, Laboratory	Agar, Environmental, Culture medium, 25 Organism	Not reported	0 ppm / 1 ppm / 10 ppm / 100 ppm	Growth (Morphology-Length, Response Site: Leaf/needle)	NR (1-100 ppm)	Development/Growth	Medium	5551990
84-74-2	42 Day(s), (42 Day(s))	*Phaseolus vulgaris* (Bean), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.16 ug/m3 / 0.82 ug/m3 / 1.37 ug/m3 / 3.03 ug/m3 / 12.46 ug/m3	Growth (Growth-Biomass, Response Site: Root)	EC10 (0.55 (0.28-1.07) ug/m3)	Development/Growth	High	1302103
84-74-2	42 Day(s), (42 Day(s))	*Phaseolus vulgaris* (Bean), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.16 ug/m3 / 0.82 ug/m3 / 1.37 ug/m3 / 3.03 ug/m3 / 12.46 ug/m3	Growth (Growth-Biomass, Response Site: Shoot)	NOEC (2.83 (1.09-7.38) ug/m3)	Development/Growth	High	1302103

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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
84-74-2	42 Day(s), (42 Day(s))	*Phaseolus vulgaris* (Bean), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.16 ug/m3 / 0.82 ug/m3 / 1.37 ug/m3 / 3.03 ug/m3 / 12.46 ug/m3	Growth (Growth-Biomass, Response Site: Whole organism)	NOEC (1.87 (0.90-3.89) ug/m3)	Development/Growth	High	1302103
84-74-2	42 Day(s), (42 Day(s))	*Phaseolus vulgaris* (Bean), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.16 ug/m3 / 0.82 ug/m3 / 1.37 ug/m3 / 3.03 ug/m3 / 12.46 ug/m3	Growth (Growth-Biomass, Response Site: Root)	NOEC (0.64 (0.36-1.14) ug/m3)	Development/Growth	High	1302103
84-74-2	42 Day(s), (42 Day(s))	*Phaseolus vulgaris* (Bean), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.16 ug/m3 / 0.82 ug/m3 / 1.37 ug/m3 / 3.03 ug/m3 / 12.46 ug/m3	Growth (Growth-Biomass, Response Site: Shoot)	EC10 (3.22 (1.32-7.87) ug/m3)	Development/Growth	High	1302103
84-74-2	42 Day(s), (42 Day(s))	*Phaseolus vulgaris* (Bean), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.16 ug/m3 / 0.82 ug/m3 / 1.37 ug/m3 / 3.03 ug/m3 / 12.46 ug/m3	Growth (Growth-Biomass, Response Site: Whole organism)	EC10 (2.32 (1.20-4.48) ug/m3)	Development/Growth	High	1302103
84-74-2	76 Day(s), (76 Day(s))	*Picea abies* (Norway Spruce), 2 Year(s), Not Reported, Laboratory	Natural soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.81 ug/m3 / 1.37 ug/m3 / 3.07 ug/m3 / 13.68 ug/m3	Accumulation (Accumulation-Residue, Response Site: Leaf/needle)	NR (0.81-13.68 ug/m3)	ADME (biotransformation)	High	1302103
84-74-2	76 Day(s), (76 Day(s))	*Picea abies* (Norway Spruce), 2 Year(s), Not Reported, Laboratory	Natural soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.81 ug/m3 / 1.37 ug/m3 / 3.07 ug/m3 / 13.68 ug/m3	Growth (Growth-Biomass, Response Site: Leaf/needle)	NOEC (13.7 ug/m3)	Development/Growth	High	1302103

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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
84-74-2	62 Day(s), (62 Day(s))	*Plantago major* (Ripplseed Plantain), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.80 ug/m3 / 1.35 ug/m3 / 3.01 ug/m3 / 12.39 ug/m3	Growth (Growth-Biomass, Response Site: Whole organism)	EC10 (2.39 (1.53-3.75) ug/m3)	Development/Growth	High	1302103
84-74-2	62 Day(s), (62 Day(s))	*Plantago major* (Ripplseed Plantain), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.80 ug/m3 / 1.35 ug/m3 / 3.01 ug/m3 / 12.39 ug/m3	Growth (Growth-Biomass, Response Site: Shoot)	NOEC (2.62 (1.43-4.79) ug/m3)	Development/Growth	High	1302103
84-74-2	62 Day(s), (62 Day(s))	*Plantago major* (Ripplseed Plantain), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.80 ug/m3 / 1.35 ug/m3 / 3.01 ug/m3 / 12.39 ug/m3	Growth (Growth-Biomass, Response Site: Whole organism)	NOEC (2.21 (1.33-3.66) ug/m3)	Development/Growth	High	1302103
84-74-2	62 Day(s), (62 Day(s))	*Plantago major* (Ripplseed Plantain), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.80 ug/m3 / 1.35 ug/m3 / 3.01 ug/m3 / 12.39 ug/m3	Growth (Growth-Biomass, Response Site: Root)	NOEC (1.55 (0.93-2.58) ug/m3)	Development/Growth	High	1302103
84-74-2	62 Day(s), (62 Day(s))	*Plantago major* (Ripplseed Plantain), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.80 ug/m3 / 1.35 ug/m3 / 3.01 ug/m3 / 12.39 ug/m3	Growth (Growth-Biomass, Response Site: Shoot)	EC10 (2.65 (1.46-4.80) ug/m3)	Development/Growth	High	1302103

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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
84-74-2	62 Day(s), (62 Day(s))	*Plantago major* (Rippleseed Plantain), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.80 ug/m3 / 1.35 ug/m3 / 3.01 ug/m3 / 12.39 ug/m3	Growth (Growth-Biomass, Response Site: Root)	EC10 (1.66 (1.04-2.66) ug/m3)	Development/Growth	High	1302103
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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 (500 mg/kg soil)	Development/Growth	High	2915866
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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 (100 mg/kg soil)	Development/Growth	High	2915866
84-74-2	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	0.14260 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 (100 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
84-74-2	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	0.14260 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 (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
84-74-2	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	0.14260 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)	NOEL (20 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
84-74-2	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	0.14260 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)	NR (5-500 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
84-74-2	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	0.14260 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
84-74-2	~6 Day(s), (~7 Day(s))	*Raphanus sativus* (Radish), Seedling, Not Reported, Not reported	Filter paper, Environmental, Fumigation, Not Reported	Measured	0 ng/L / 10-150 ng/L	Biochemical (Biochemistry-Chlorophyll, Response Site: Leaf/needle)	NR (130 ng/L)	Mechanistic: Photosynthesis	Uninformative	1333234
84-74-2	1-7 Day(s), (~7 Day(s))	*Raphanus sativus* (Radish), Seedling, Not Reported, Not reported	Filter paper, Environmental, Fumigation, Not Reported	Unmeasured values (some measured values reported in article)	0 ng/L / 10-150 ng/L	Physiology (Physiology-Pigmentation, Response Site: Leaf/needle)	NR (10-150 ng/L)	Mechanistic: Photosynthesis	Uninformative	1333234

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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
84-74-2	4-7 Day(s), (~7 Day(s))	*Raphanus sativus* (Radish), Seedling, Not Reported, Not reported	Filter paper, Environmental, Fumigation, Not Reported	Measured	0 ug/L / 1-4 ug/L	Cellular (Cell(s)-Cell changes, Response Site: Chloroplast)	NR (1-4 ug/L)	Mechanistic: Cytotoxicity; Photosynthesis	Uninformative	1333234
84-74-2	4-7 Day(s), (~7 Day(s))	*Raphanus sativus* (Radish), Seedling, Not Reported, Not reported	Filter paper, Environmental, Fumigation, Not Reported	Measured	0 ug/L / 1-4 ug/L	Biochemical (Biochemistry-Chlorophyll, Response Site: Chloroplast,Leaf/needle)	NR (1-4 ug/L)	Mechanistic: Cytotoxicity; Photosynthesis	Uninformative	1333234
84-74-2	6-7 Day(s), (~7 Day(s))	*Raphanus sativus* (Radish), Seedling, Not Reported, Not reported	Filter paper, Environmental, Fumigation, Not Reported	Unmeasured values (some measured values reported in article)	0 ng/L / 10-150 ng/L	Biochemical (Biochemistry-Chlorophyll, Response Site: Not reported)	NR (10-150 ng/L)	Mechanistic: Photosynthesis	Uninformative	1333234
84-74-2	7 Day(s), (~7 Day(s))	*Raphanus sativus* (Radish), Seedling, Not Reported, Not reported	Filter paper, Environmental, Fumigation, Not Reported	Unmeasured values (some measured values reported in article)	0 ng/L / 10-150 ng/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (10-150 ng/L)	Mortality	Uninformative	1333234
84-74-2	4-7 Day(s), (~7 Day(s))	*Raphanus sativus* (Radish), Seedling, Not Reported, Not reported	Filter paper, Environmental, Fumigation, Not Reported	Measured	0 ug/L / 1-4 ug/L	Physiology (Physiology-Pigmentation, Response Site: Leaf/needle)	NR (1-4 ug/L)	Mechanistic: Cytotoxicity; Photosynthesis	Uninformative	1333234
84-74-2	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
84-74-2	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

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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
84-74-2	3 Day(s), (15 Day(s))	*Sinapis alba* (White Mustard), Seedling, 21 Days post planting/sowing, Not Reported, Not reported	Culture, Environmental, Spray, hand, 12 Organism	Measured	0 ug/cm2 lf / 0 ug/cm2 lf / 3.5 ug/cm2 lf	Physiology (Injury-Chlorosis, Response Site: Leaf/needle)	NR (3.5 ug/cm2 lf)	Skin and Connective Tissue	Medium	9430481
84-74-2	14 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 / 3.5 ug/cm2 lf	Biochemical (Biochemistry-Chlorophyll, Response Site: Leaf/needle)	NR (3.5 ug/cm2 lf)	Mechanistic: Photosynthesis	Medium	9430481
84-74-2	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 / 3.5 ug/cm2 lf	Accumulation (Accumulation-Residue, Response Site: Whole organism)	NR (3.5 ug/cm2 lf)	ADME (biotransformation)	Medium	9430481
84-74-2	3 Day(s), (15 Day(s))	*Sinapis alba* (White Mustard), 3-4 Weeks postemergence, Not Reported, Laboratory (NR)	Culture, Environmental, Spray, foliar, Not Reported	Unmeasured	0.05 ug/cm2 / 0.25 ug/cm2 / 1.5 ug/cm2	Physiology (Injury-Chlorosis, Response Site: Leaf/needle)	NR (1.5 ug/cm2)	Development/Growth	Uninformative	680337
84-74-2	1-15 Day(s), (15 Day(s))	*Sinapis alba* (White Mustard), 3-4 Weeks postemergence, Not Reported, Laboratory (NR)	Culture, Environmental, Spray, foliar, Not Reported	Unmeasured	0.05 ug/cm2 / 0.25 ug/cm2 / 1.5 ug/cm2	Accumulation (Accumulation-Residue, Response Site: Leaf/needle)	NR (0.05-1.5 ug/cm2)	ADME (biotransformation)	Uninformative	680337
84-74-2	1-15 Day(s), (15 Day(s))	*Sinapis alba* (White Mustard), 3-4 Weeks postemergence, Not Reported, Laboratory (NR)	Culture, Environmental, Spray, foliar, Not Reported	Unmeasured	0.05 ug/cm2 / 0.25 ug/cm2 / 1.5 ug/cm2	Physiology (Injury-Chlorosis, Response Site: Leaf/needle)	NR (0.05-1.5 ug/cm2)	Development/Growth	Uninformative	680337
84-74-2	4 Day(s), (12 Day(s))	*Sorghum bicolor* (Broomcorn), Seedling, Both, Not reported	Hydroponic, Environmental, Environmental, unspecified, NA Both male and female	Unmeasured	0 mg/L / 50 mg/L	Growth (Growth-Length, Response Site: Root)	NR (50 mg/L)	Development/Growth	Uninformative	5433174

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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
84-74-2	12 Day(s), (12 Day(s))	*Sorghum bicolor* (Broomcorn), Seedling, Both, Not reported	Hydroponic, Environmental, Environmental, unspecified, NA Both male and female	Unmeasured	0 mg/L / 50 mg/L	Accumulation (Accumulation-Residue, Response Site: Root)	NR (50 mg/L)	ADME (biotransformation)	Uninformative	5433174
84-74-2	9-12 Day(s), (12 Day(s))	*Sorghum bicolor* (Broomcorn), Seedling, Both, Not reported	Hydroponic, Environmental, Environmental, unspecified, NA Both male and female	Unmeasured	0 mg/L / 50 mg/L	Physiology (Injury-Chlorosis, Response Site: Not reported)	NR (50 mg/L)	Development/Growth	Uninformative	5433174
84-74-2	NA Day(s), (Not Reported)	*Spinacia oleracea* (Spinach), Not intact, Not Reported, Laboratory	Culture, In Vitro, In Vitro, Not Reported	Unmeasured	0 M / 0.001 M / 0.0001 M / 0.00001 M / 0.000001 M	Physiology (Physiology-Electron transfer system activity, Response Site: Not reported)	IC50 (0.0003 M)	Mechanistic: Photosynthesis	Medium	1333016
84-74-2	62 Day(s), (62 Day(s))	*Trifolium repens* (Dutch Clover), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.80 ug/m3 / 1.35 ug/m3 / 3.01 ug/m3 / 12.39 ug/m3	Growth (Growth-Biomass, Response Site: Whole organism)	EC10 (0.33 (0.12-0.91) ug/m3)	Development/Growth	High	1302103
84-74-2	62 Day(s), (62 Day(s))	*Trifolium repens* (Dutch Clover), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.80 ug/m3 / 1.35 ug/m3 / 3.01 ug/m3 / 12.39 ug/m3	Growth (Growth-Biomass, Response Site: Shoot)	EC10 (0.39 (0.14-1.07) ug/m3)	Development/Growth	High	1302103
84-74-2	62 Day(s), (62 Day(s))	*Trifolium repens* (Dutch Clover), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.80 ug/m3 / 1.35 ug/m3 / 3.01 ug/m3 / 12.39 ug/m3	Growth (Growth-Biomass, Response Site: Whole organism)	NOEC (0.51 (0.27-0.96) ug/m3)	Development/Growth	High	1302103
84-74-2	62 Day(s), (62 Day(s))	*Trifolium repens* (Dutch Clover), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.80 ug/m3 / 1.35 ug/m3 / 3.01 ug/m3 / 12.39 ug/m3	Growth (Growth-Biomass, Response Site: Shoot)	NOEC (0.60 (0.32-1.12) ug/m3)	Development/Growth	High	1302103

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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
84-74-2	62 Day(s), (62 Day(s))	*Trifolium repens* (Dutch Clover), Post-emergence, 3-4 Weeks post-emergence, Not Reported, Laboratory	Artificial soil, Environmental, Fumigation, Not Reported	Measured	0.14 ug/m3 / 0.80 ug/m3 / 1.35 ug/m3 / 3.01 ug/m3 / 12.39 ug/m3	Accumulation (Accumulation-Residue, Response Site: Leaf/needle)	NR (0.80-3.01 ug/m3)	ADME (biotransformation)	High	1302103
84-74-2	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 (42.73 ug/ml)	Reproductive/Teratogenic	High	3515118
84-74-2	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
84-74-2	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 (8.02 ug/ml)	Reproductive/Teratogenic	High	3515118
84-74-2	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 (5.08 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
84-74-2	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
84-74-2	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 (37.70 ug/ml)	Reproductive/Teratogenic	High	3515118
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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

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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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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

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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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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

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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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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

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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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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

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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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	14 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	14 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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 (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646

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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
84-74-2	14 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	14 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	14 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646

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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
84-74-2	14 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	14 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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)-Bisphosphate carboxy-lase/oxygenase (Rubisco), Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
84-74-2	14 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646

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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
84-74-2	14 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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 (Growth-Weight, Response Site: Root)	LOEL (10 mg/kg dry soil)	Development/Growth	High	5495646
84-74-2	14 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	14 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646

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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
84-74-2	14 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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: Leaf/needle)	LOEL (10 mg/kg dry soil)	Development/Growth	High	5495646
84-74-2	14 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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-CO2 concentration, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
84-74-2	14 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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-Photosystem II (PSII) electron transport activity, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646

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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
84-74-2	14 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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 (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
84-74-2	14 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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-Net photosynthetic rate, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
84-74-2	14 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646

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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
84-74-2	14 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	14 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	14 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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 (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646

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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
84-74-2	14 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	14 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646

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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
84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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: Stem)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646

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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
84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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 (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646

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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
84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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-CO2 concentration, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646

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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
84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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: Stem)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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 (Growth-Weight, Response Site: Root)	LOEL (10 mg/kg dry soil)	Development/Growth	High	5495646
84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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: Stem)	LOEL (10 mg/kg dry soil)	Development/Growth	High	5495646

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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
84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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-Photosystem II (PSII) electron transport activity, Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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)-Bisphosphate carboxylase/oxygenase (Rubisco), Response Site: Leaf/needle)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646

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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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84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646

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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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84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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: Stem)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646

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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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84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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 (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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-Photosystem II (PSII) electron transport activity, Response Site: Leaf/needle)	NOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646

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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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84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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: Stem)	NOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646

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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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84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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 (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
84-74-2	24 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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 (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646

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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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84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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)	NOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646

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Terrestrial: Vascular plants Extraction Table

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84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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-Net photosynthetic rate, Response Site: Leaf/needle)	NOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
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84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
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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
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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-Net photosynthetic rate, Response Site: Leaf/needle)	LOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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-Photosystem II (PSII) electron transport activity, Response Site: Leaf/needle)	LOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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: Stem)	NOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646

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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
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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)	NOEL (20 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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-Photosystem II (PSII) electron transport activity, Response Site: Leaf/needle)	NOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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: Stem)	LOEL (10 mg/kg dry soil)	Development/Growth	High	5495646

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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
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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 (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646

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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
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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)	NOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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 (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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 (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646

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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
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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)	NOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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 (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646

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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
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646

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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
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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 (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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: Stem)	LOEL (40 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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: Stem)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646

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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
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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: Stem)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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: Stem)	LOEL (10 mg/kg dry soil)	Mechanistic: Oxidative stress (including redox biology); Photosynthesis	High	5495646

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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
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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: Leaf/needle)	LOEL (10 mg/kg dry soil)	Development/Growth	High	5495646
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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	High	5495646
84-74-2	40 Day(s), (40 Day(s))	*Triticum aestivum* (Bread Wheat), Seed, Not Reported, Laboratory (PROVIDED BY THE AGRO-ENVIRONMENTAL PROTECTION INSTITUTE, MINISTRY OF AGRICULTURE, 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 (Growth-Weight, Response Site: Root)	NOEL (10 mg/kg dry soil)	Development/Growth	High	5495646

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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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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

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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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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	0.14260 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 (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
84-74-2	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	0.14260 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 (500 mg/kg soil)	Mechanistic: Biomarkers (exposure and effect); Photosynthesis	High	2915866
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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 (500 mg/kg soil)	Development/Growth	High	2915866
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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
84-74-2	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	0.14260 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 (5 mg/kg soil)	Development/Growth	High	2915866
84-74-2	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)	EC50 (1559 mg/kg dry soil)	Development/Growth	Medium	2510954
84-74-2	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 (31235 mg/kg dry soil)	Reproductive/Teratogenic	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
84-74-2	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
84-74-2	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
84-74-2	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 (4016 mg/kg dry soil)	Development/Growth	Medium	2510954
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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)	NR (5-500 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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	20 Day(s), (60 Day(s))	*Vigna unguiculata* (Black-Eyed Pea), Seedling, 3 Day(s), Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Growth (Growth-Biomass, Response Site: Shoot)	NOEL (10 mg/kg soil)	Development/Growth	Low	5495799

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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
84-74-2	20 Day(s), (60 Day(s))	*Vigna unguiculata* (Black-Eyed Pea), Seedling, 3 Day(s), Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Growth (Growth-Biomass, Response Site: Root)	NOEL (10 mg/kg soil)	Development/Growth	Low	5495799
84-74-2	20 Day(s), (60 Day(s))	*Vigna unguiculata* (Black-Eyed Pea), Seedling, 3 Day(s), Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Growth (Growth-Biomass, Response Site: Shoot)	LOEL (100 mg/kg soil)	Development/Growth	Low	5495799
84-74-2	20 Day(s), (60 Day(s))	*Vigna unguiculata* (Black-Eyed Pea), Seedling, 3 Day(s), Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Growth (Growth-Biomass, Response Site: Root)	LOEL (100 mg/kg soil)	Development/Growth	Low	5495799
84-74-2	20-60 Day(s), (60 Day(s))	*Vigna unguiculata* (Black-Eyed Pea), Seedling, 3 Day(s), Not Reported, Laboratory	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Accumulation (Accumulation-Residue, Response Site: Root,Shoot)	NR (10-100 mg/kg soil)	ADME (biotransformation)	Medium	5495799

* 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
84-74-2	30 Day(s), (30 Day(s))	*Coturnix japonica* (Japanese Quail), 10 Week(s), Male, Laboratory (AVIARY UNIT, IRENE ANIMAL IMPROVEMENT RESEARCH STATION, PRETORIA)	No substrate, Oral (diet, drink, gavage), Gavage, Not Reported	Unmeasured	0 mg/kg bdwt/d / 1 mg/kg bdwt/d / 10 mg/kg bdwt/d / 50 mg/kg bdwt/d / 200 mg/kg bdwt/d / 400 mg/kg bdwt/d	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Testes)	NR (1-400 mg/kg bdwt/d)	Development/Growth	Medium	2346127
84-74-2	30 Day(s), (30 Day(s))	*Coturnix japonica* (Japanese Quail), 10 Week(s), Male, Laboratory (AVIARY UNIT, IRENE ANIMAL IMPROVEMENT RESEARCH STATION, PRETORIA)	No substrate, Oral (diet, drink, gavage), Gavage, Not Reported	Unmeasured	0 mg/kg bdwt/d / 1 mg/kg bdwt/d / 10 mg/kg bdwt/d / 50 mg/kg bdwt/d / 200 mg/kg bdwt/d / 400 mg/kg bdwt/d	Cellular (Genetics-17 beta-hydroxysteroid dehydrogenase mRNA, Response Site: Not reported)	LOEL (1 mg/kg bdwt/d)	Mechanistic: Biomarkers (exposure and effect); Endocrine toxicity; Reproductive/Teratogenic	Medium	2346127
84-74-2	30 Day(s), (30 Day(s))	*Coturnix japonica* (Japanese Quail), 10 Week(s), Male, Laboratory (AVIARY UNIT, IRENE ANIMAL IMPROVEMENT RESEARCH STATION, PRETORIA)	No substrate, Oral (diet, drink, gavage), Gavage, Not Reported	Unmeasured	0 mg/kg bdwt/d / 1 mg/kg bdwt/d / 10 mg/kg bdwt/d / 50 mg/kg bdwt/d / 200 mg/kg bdwt/d / 400 mg/kg bdwt/d	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEL (400 mg/kg bdwt/d)	Mechanistic: Biomarkers (exposure and effect); Endocrine toxicity; Reproductive/Teratogenic	Medium	2346127
84-74-2	30 Day(s), (30 Day(s))	*Coturnix japonica* (Japanese Quail), 10 Week(s), Male, Laboratory (AVIARY UNIT, IRENE ANIMAL IMPROVEMENT RESEARCH STATION, PRETORIA)	No substrate, Oral (diet, drink, gavage), Gavage, Not Reported	Unmeasured	0 mg/kg bdwt/d / 1 mg/kg bdwt/d / 10 mg/kg bdwt/d / 50 mg/kg bdwt/d / 200 mg/kg bdwt/d / 400 mg/kg bdwt/d	Cellular (Genetics-Androgen receptor mRNA, Response Site: Not reported)	NOEL (400 mg/kg bdwt/d)	Mechanistic: Biomarkers (exposure and effect); Endocrine toxicity; Reproductive/Teratogenic	Medium	2346127

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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
84-74-2	30 Day(s), (30 Day(s))	*Coturnix japonica* (Japanese Quail), 10 Week(s), Male, Laboratory (AVIARY UNIT, IRENE ANIMAL IMPROVEMENT RESEARCH STATION, PRETORIA)	No substrate, Oral (diet, drink, gavage), Gavage, Not Reported	Unmeasured	0 mg/kg bdwt/d / 1 mg/kg bdwt/d / 10 mg/kg bdwt/d / 50 mg/kg bdwt/d / 200 mg/kg bdwt/d / 400 mg/kg bdwt/d	Cellular (Genetics-Cytochrome P450 family 19 subfamily A member 1 transcript variant 1 mRNA, Response Site: Not reported)	NOEL (400 mg/kg bdwt/d)	Mechanistic: Biomarkers (exposure and effect); Endocrine toxicity; Reproductive/Teratogenic	Medium	2346127
84-74-2	30 Day(s), (30 Day(s))	*Coturnix japonica* (Japanese Quail), 10 Week(s), Male, Laboratory (AVIARY UNIT, IRENE ANIMAL IMPROVEMENT RESEARCH STATION, PRETORIA)	No substrate, Oral (diet, drink, gavage), Gavage, Not Reported	Unmeasured	0 mg/kg bdwt/d / 1 mg/kg bdwt/d / 10 mg/kg bdwt/d / 50 mg/kg bdwt/d / 200 mg/kg bdwt/d / 400 mg/kg bdwt/d	Cellular (Genetics-Hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 2 mRNA, Response Site: Not reported)	LOEL (1 mg/kg bdwt/d)	Mechanistic: Biomarkers (exposure and effect); Endocrine toxicity; Reproductive/Teratogenic	Medium	2346127
84-74-2	30 Day(s), (30 Day(s))	*Coturnix japonica* (Japanese Quail), 10 Week(s), Male, Laboratory (AVIARY UNIT, IRENE ANIMAL IMPROVEMENT RESEARCH STATION, PRETORIA)	No substrate, Oral (diet, drink, gavage), Gavage, Not Reported	Unmeasured	0 mg/kg bdwt/d / 1 mg/kg bdwt/d / 10 mg/kg bdwt/d / 50 mg/kg bdwt/d / 200 mg/kg bdwt/d / 400 mg/kg bdwt/d	Growth (Morphology-Weight, Response Site: Testes)	NOEL (400 mg/kg bdwt/d)	Development/Growth	Medium	2346127
84-74-2	30 Day(s), (30 Day(s))	*Coturnix japonica* (Japanese Quail), 10 Week(s), Male, Laboratory (AVIARY UNIT, IRENE ANIMAL IMPROVEMENT RESEARCH STATION, PRETORIA)	No substrate, Oral (diet, drink, gavage), Gavage, Not Reported	Unmeasured	0 mg/kg bdwt/d / 1 mg/kg bdwt/d / 10 mg/kg bdwt/d / 50 mg/kg bdwt/d / 200 mg/kg bdwt/d / 400 mg/kg bdwt/d	Cellular (Genetics-17-alpha hydroxylase mRNA, Response Site: Not reported)	NR (1-400 mg/kg bdwt/d)	Mechanistic: Biomarkers (exposure and effect); Endocrine toxicity; Reproductive/Teratogenic	Medium	2346127

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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
84-74-2	30 Day(s), (30 Day(s))	*Coturnix japonica* (Japanese Quail), 10 Week(s), Male, Laboratory (AVIARY UNIT, IRENE ANIMAL IMPROVEMENT RESEARCH STATION, PRETORIA)	No substrate, Oral (diet, drink, gavage), Gavage, Not Reported	Unmeasured	0 mg/kg bdwt/d / 1 mg/kg bdwt/d / 10 mg/kg bdwt/d / 50 mg/kg bdwt/d / 200 mg/kg bdwt/d / 400 mg/kg bdwt/d	Cellular (Genetics-P450scc mRNA, Response Site: Not reported)	NR (1-400 mg/kg bdwt/d)	Mechanistic: Biomarkers (exposure and effect); Endocrine toxicity; Reproductive/Teratogenic	Medium	2346127
84-74-2	30 Day(s), (30 Day(s))	*Coturnix japonica* (Japanese Quail), 10 Week(s), Male, Laboratory (AVIARY UNIT, IRENE ANIMAL IMPROVEMENT RESEARCH STATION, PRETORIA)	No substrate, Oral (diet, drink, gavage), Gavage, Not Reported	Unmeasured	0 mg/kg bdwt/d / 1 mg/kg bdwt/d / 10 mg/kg bdwt/d / 50 mg/kg bdwt/d / 200 mg/kg bdwt/d / 400 mg/kg bdwt/d	Growth (Growth-Weight, Response Site: Whole organism)	NOEL (400 mg/kg bdwt/d)	Development/Growth	Medium	2346127
84-74-2	30 Day(s), (30 Day(s))	*Coturnix japonica* (Japanese Quail), 10 Week(s), Male, Laboratory (AVIARY UNIT, IRENE ANIMAL IMPROVEMENT RESEARCH STATION, PRETORIA)	No substrate, Oral (diet, drink, gavage), Gavage, Not Reported	Unmeasured	0 mg/kg bdwt/d / 1 mg/kg bdwt/d / 10 mg/kg bdwt/d / 50 mg/kg bdwt/d / 200 mg/kg bdwt/d / 400 mg/kg bdwt/d	Cellular (Histology-Atrophy,Congestion,Degeneration,Edema,Vacuolization, Response Site: Blood vessel,Sperm,Semeniferous tubules,Testes)	NR (1-400 mg/kg bdwt/d)	Reproductive/Teratogenic	Medium	2346127
84-74-2	NA Egg to juvenile, (NA Egg to juvenile)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, 3 Organism	Unmeasured	0 mg/kg egg / 100 mg/kg egg	Biochemical (Biochemistry-8-hydroxydeoxyguanosine, Response Site: Serum)	NOEL (100 mg/kg egg)	Mechanistic: Biomarkers (exposure and effect); Genotox (including DNA repair)	High	1249807
84-74-2	NA Until hatch, (NA Egg to juvenile)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, 14 Organism	Unmeasured	0 mg/kg egg / 100 mg/kg egg	Mortality (Mortality-Hatch, Response Site: Not reported)	NOEL (100 mg/kg egg)	Mortality	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
84-74-2	NA Until hatch, (NA Egg to juvenile)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, 14 Organism	Unmeasured	0 mg/kg egg / 100 mg/kg egg	Growth (Development-Deformation, Response Site: Not reported)	NR (100 mg/kg egg)	Development/Growth	High	1249807
84-74-2	NA Until hatch, (NA Egg to juvenile)	*Gallus gallus* (Chicken), Egg, Not Reported, Laboratory (FROM A LOCAL BREEDER)	No substrate, Injection, Albumin injection, 14 Organism	Unmeasured	0 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
84-74-2	10 Day(s), (10 Day(s))	*Gallus gallus* (Chicken), Not reported, Male, Laboratory	No substrate, Oral (diet, drink, gavage), Oral via capsule, Not Reported	Unmeasured	1.5-5.6 cm3/kg bdwt	Physiology (Physiology-Body temperature,Diarrhea,Emaciation, emaciated,Physiology, general,Pigmentation,Lacrimation, Tearing, Response Site: Comb,Digestive tract,Eye)	NR (1.5-5.6 cm3/kg bdwt)	Ocular and Sensory	Uninformative	1332948
84-74-2	10 Day(s), (10 Day(s))	*Gallus gallus* (Chicken), Not reported, Male, Laboratory	No substrate, Oral (diet, drink, gavage), Oral via capsule, Not Reported	Unmeasured	1.5-5.6 cm3/kg bdwt	Physiology (Physiology-Body temperature,Diarrhea,Emaciation, emaciated,Physiology, general,Pigmentation,Lacrimation, Tearing, Response Site: Comb,Digestive tract,Eye)	NR (1.5-5.6 cm3/kg bdwt)	Gastrointestinal	Uninformative	1332948

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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
84-74-2	10 Day(s), (10 Day(s))	*Gallus gallus* (Chicken), Not reported, Male, Laboratory	No substrate, Oral (diet, drink, gavage), Oral via capsule, Not Reported	Unmeasured	1.5-5.6 cm3/kg bdwt	Physiology (Physiology-Body temperature,Diarrhea,Emaciation, emaciated,Physiology, general,Pigmentation,Lacrimation, Tearing, Response Site: Comb,Digestive tract,Eye)	NR (1.5-5.6 cm3/kg bdwt)	Musculoskeletal	Uninformative	1332948
84-74-2	10 Day(s), (10 Day(s))	*Gallus gallus* (Chicken), Not reported, Male, Laboratory	No substrate, Oral (diet, drink, gavage), Oral via capsule, Not Reported	Unmeasured	1.5-5.6 cm3/kg bdwt	Physiology (Physiology-Body temperature,Diarrhea,Emaciation, emaciated,Physiology, general,Pigmentation,Lacrimation, Tearing, Response Site: Comb,Digestive tract,Eye)	NR (1.5-5.6 cm3/kg bdwt)	Skin and Connective Tissue	Uninformative	1332948
84-74-2	10 Day(s), (10 Day(s))	*Gallus gallus* (Chicken), Not reported, Male, Laboratory	No substrate, Oral (diet, drink, gavage), Oral via capsule, Not Reported	Unmeasured	1.5-5.6 cm3/kg bdwt	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (1.5-5.6 cm3/kg bdwt)	Mortality	Uninformative	1332948
84-74-2	<11 Day(s), (11 Day(s))	*Gallus gallus* (Chicken), Not reported, Male, Laboratory	No substrate, Oral (diet, drink, gavage), Oral via capsule, Not Reported	Unmeasured	1.8 cm3/kg bdwt	Physiology (Physiology-Physiology, general,Pigmentation,Swelling, Response Site: Gall bladder,Intestinal tract,Stomach,Spleen)	NR (1.8 cm3/kg bdwt)	Gastrointestinal	Uninformative	1332948

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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
84-74-2	<11 Day(s), (11 Day(s))	*Gallus gallus* (Chicken), Not reported, Male, Laboratory	No substrate, Oral (diet, drink, gavage), Oral via capsule, Not Reported	Unmeasured	1.8 cm3/kg bdwt	Physiology (Physiology-Body temperature,Diarrhea,Emaciation, emaciated,Physiology, general,Pigmentation,Lacrimation, Tearing, Response Site: Comb,Digestive tract,Eye)	NR (1.8 cm3/kg bdwt)	Gastrointestinal	Uninformative	1332948
84-74-2	<11 Day(s), (11 Day(s))	*Gallus gallus* (Chicken), Not reported, Male, Laboratory	No substrate, Oral (diet, drink, gavage), Oral via capsule, Not Reported	Unmeasured	1.8 cm3/kg bdwt	Physiology (Physiology-Body temperature,Diarrhea,Emaciation, emaciated,Physiology, general,Pigmentation,Lacrimation, Tearing, Response Site: Comb,Digestive tract,Eye)	NR (1.8 cm3/kg bdwt)	Musculoskeletal	Uninformative	1332948
84-74-2	<11 Day(s), (11 Day(s))	*Gallus gallus* (Chicken), Not reported, Male, Laboratory	No substrate, Oral (diet, drink, gavage), Oral via capsule, Not Reported	Unmeasured	1.8 cm3/kg bdwt	Physiology (Physiology-Body temperature,Diarrhea,Emaciation, emaciated,Physiology, general,Pigmentation,Lacrimation, Tearing, Response Site: Comb,Digestive tract,Eye)	NR (1.8 cm3/kg bdwt)	Skin and Connective Tissue	Uninformative	1332948

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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
84-74-2	<11 Day(s), (11 Day(s))	*Gallus gallus* (Chicken), Not reported, Male, Laboratory	No substrate, Oral (diet, drink, gavage), Oral via capsule, Not Reported	Unmeasured	1.8 cm3/kg bdwt	Physiology (Physiology-Body temperature,Diarrhea,Emaciation, emaciated,Physiology, general,Pigmentation,Lacrimation, Tearing, Response Site: Comb,Digestive tract,Eye)	NR (1.8 cm3/kg bdwt)	Ocular and Sensory	Uninformative	1332948
84-74-2	<11 Day(s), (11 Day(s))	*Gallus gallus* (Chicken), Not reported, Male, Laboratory	No substrate, Oral (diet, drink, gavage), Oral via capsule, Not Reported	Unmeasured	1.8 cm3/kg bdwt	Physiology (Physiology-Physiology, general,Pigmentation,Swelling, Response Site: Gall bladder,Intestinal tract,Stomach,Spleen)	NR (1.8 cm3/kg bdwt)	Immune/Hematological	Uninformative	1332948
84-74-2	<11 Day(s), (11 Day(s))	*Gallus gallus* (Chicken), Not reported, Male, Laboratory	No substrate, Oral (diet, drink, gavage), Oral via capsule, Not Reported	Unmeasured	1.8 cm3/kg bdwt	Physiology (Physiology-Physiology, general,Pigmentation,Swelling, Response Site: Gall bladder,Intestinal tract,Stomach,Spleen)	NR (1.8 cm3/kg bdwt)	Hepatic/Liver	Uninformative	1332948
84-74-2	11 Day(s), (11 Day(s))	*Gallus gallus* (Chicken), Not reported, Male, Laboratory	No substrate, Oral (diet, drink, gavage), Oral via capsule, Not Reported	Unmeasured	1.8 cm3/kg bdwt	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (1.8 cm3/kg bdwt)	Mortality	Uninformative	1332948
84-74-2	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)	LOEL (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
84-74-2	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)	LOEL (10 ppm diet)	Development/Growth	Uninformative	681729
84-74-2	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
84-74-2	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
84-74-2	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
84-74-2	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)	LOEL (10 ppm diet)	Development/Growth	Uninformative	681729
84-74-2	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)	LOEL (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
84-74-2	12 Day(s), (12 Day(s))	*Capra hircus* (Domestic Goat), Not reported, Not Reported, Laboratory	No substrate, Injection, Subcutaneous, Not Reported	Unmeasured	5-50 cm3	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (0.5-50 cm3)	Mortality	Uninformative	1332948
84-74-2	12 Day(s), (12 Day(s))	*Capra hircus* (Domestic Goat), Not reported, Not Reported, Laboratory	No substrate, Injection, Subcutaneous, Not Reported	Unmeasured	5-50 cm3	Physiology (Injury-Injury, general, Response Site: Not reported)	NR (0.5-50 cm3)	Respiratory	Uninformative	1332948
84-74-2	12 Day(s), (12 Day(s))	*Capra hircus* (Domestic Goat), Not reported, Not Reported, Laboratory	No substrate, Injection, Subcutaneous, Not Reported	Unmeasured	5-50 cm3	Physiology (Injury-Injury, general, Response Site: Not reported)	NR (0.5-50 cm3)	Immune/Hematological	Uninformative	1332948
84-74-2	12 Day(s), (12 Day(s))	*Capra hircus* (Domestic Goat), Not reported, Not Reported, Laboratory	No substrate, Injection, Subcutaneous, Not Reported	Unmeasured	5-50 cm3	Physiology (Injury-Injury, general, Response Site: Not reported)	NR (0.5-50 cm3)	Hepatic/Liver	Uninformative	1332948
84-74-2	12 Day(s), (12 Day(s))	*Capra hircus* (Domestic Goat), Not reported, Not Reported, Laboratory	No substrate, Injection, Subcutaneous, Not Reported	Unmeasured	5-50 cm3	Physiology (Injury-Injury, general, Response Site: Not reported)	NR (0.5-50 cm3)	Reproductive/Teratogenic	Uninformative	1332948
84-74-2	12 Day(s), (12 Day(s))	*Capra hircus* (Domestic Goat), Not reported, Not Reported, Laboratory	No substrate, Injection, Subcutaneous, Not Reported	Unmeasured	5-50 cm3	Physiology (Injury-Injury, general, Response Site: Not reported)	NR (0.5-50 cm3)	Cardiovascular	Uninformative	1332948
84-74-2	12 Day(s), (12 Day(s))	*Capra hircus* (Domestic Goat), Not reported, Not Reported, Laboratory	No substrate, Injection, Subcutaneous, Not Reported	Unmeasured	5-50 cm3	Physiology (Injury-Injury, general, Response Site: Not reported)	NR (0.5-50 cm3)	Gastrointestinal	Uninformative	1332948

* 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
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, 30 Samples	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Meiotic abnormalities, diakinesis and 1st, Response Site: Oocyte)	NR (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Chromosomal breaks, Response Site: Gonad(s))	NR (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, >30 Samples	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Apoptosis, Response Site: Gonad(s))	NR (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 uM / 100 uM	Accumulation (Accumulation-Residue, Response Site: Whole organism)	NR (100 uM)	ADME (biotransformation)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, >30 Samples	Unmeasured	0 uM / 1 uM / 10 uM / 100 uM / 500 uM	Cellular (Genetics-Apoptosis, Response Site: Not reported)	LOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459

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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
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Not reported, Environmental, Culture medium, Not Reported	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Transcription factor cep-1 mRNA, Response Site: Whole organism)	NOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Not reported, Environmental, Culture medium, Not Reported	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Serine/threonine-protein kinase chk-1 mRNA, Response Site: Whole organism)	NOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva (Measured in: Adult), Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, NA Adult	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Meiotic abnormality, Response Site: Gonad(s))	NR (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Not reported, Environmental, Culture medium, Not Reported	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Serine/threonine-protein kinase ATR mRNA, Response Site: Whole organism)	NOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Not reported, Environmental, Culture medium, Not Reported	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Protein arginine N-methyltransferase 5 mRNA, Response Site: Whole organism)	NOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459

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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
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Not reported, Environmental, Culture medium, Not Reported	Unmeasured	0 uM / 100 uM	Cellular (Genetics-MutS protein homolog 5 mRNA, Response Site: Whole organism)	NOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Not reported, Environmental, Culture medium, Not Reported	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Meiotic recombination protein spo-11 mRNA, Response Site: Whole organism)	NOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Not reported, Environmental, Culture medium, Not Reported	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Double-strand break repair protein mre-11 mRNA, Response Site: Whole organism)	NOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Not reported, Environmental, Culture medium, Not Reported	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Telomere length regulation protein clk-2 mRNA, Response Site: Whole organism)	NOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Not reported, Environmental, Culture medium, Not Reported	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Serine/threonine-protein kinase ATM mRNA, Response Site: Whole organism)	NOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459

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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
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Not reported, Environmental, Culture medium, 32 Samples	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Meiotic abnormalities, diakinesis and 1st, Response Site: Gonad(s))	NR (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Not reported, Environmental, Culture medium, Not Reported	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Double-strand break repair protein mre-11 mRNA, Response Site: Whole organism)	LOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Not reported, Environmental, Culture medium, Not Reported	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Checkpoint protein hus-1 mRNA, Response Site: Whole organism)	NOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Not reported, Environmental, Culture medium, Not Reported	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Cell cycle checkpoint protein RAD1 homolog mrt-2 mRNA, Response Site: Whole organism)	NOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, >5 Samples	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Chromosomal breaks, Response Site: Gonad(s))	NOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459

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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
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, 3 Samples	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Chromosomal breaks, Response Site: Gonad(s))	NOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Not reported, Environmental, Culture medium, Not Reported	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Serine/threonine-protein kinase chk-1 mRNA, Response Site: Whole organism)	LOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Not reported, Environmental, Culture medium, Not Reported	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Protein arginine N-methyltransferase 5 mRNA, Response Site: Whole organism)	LOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Not reported, Environmental, Culture medium, Not Reported	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Meiotic recombination protein spo-11 mRNA, Response Site: Whole organism)	LOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Not reported, Environmental, Culture medium, Not Reported	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Double-Strand Break factor dsb-2 mRNA, Response Site: Whole organism)	NOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459

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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
84-74-2	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
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, >5 Samples	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Chromosomal breaks, Response Site: Gonad(s))	LOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, 3 Samples	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Chromosomal breaks, Response Site: Gonad(s))	LOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, >30 Samples	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Apoptosis, Response Site: Gonad(s))	LOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, >30 Samples	Unmeasured	0 uM / 1 uM / 10 uM / 100 uM / 500 uM	Cellular (Genetics-Apoptosis, Response Site: Not reported)	NOEL (10 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459

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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
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Not reported, Environmental, Culture medium, Not Reported	Unmeasured	0 uM / 100 uM	Cellular (Genetics-DNA repair protein RAD51 mRNA, Response Site: Whole organism)	NOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Not reported, Environmental, Culture medium, Not Reported	Unmeasured	0 uM / 100 uM	Cellular (Genetics-DNA-dependent ATPase protein rad54 mRNA, Response Site: Whole organism)	NOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva, Not Reported, Laboratory (NR)	Not reported, Environmental, Culture medium, Not Reported	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Double-Strand Break factor dsb-1 mRNA, Response Site: Whole organism)	NOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	24 Hour(s), (24 Hour(s))	*Caenorhabditis elegans* (Nematode), Larva (Measured in: Adult), Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, 53 Adult	Unmeasured	0 uM / 100 uM	Cellular (Genetics-Meiotic abnormality, Response Site: Gonad(s))	LOEL (100 uM)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Genotox (including DNA repair)	Medium	5043459
84-74-2	4 Day(s), (4 Day(s))	*Caenorhabditis elegans* (Nematode), Larva (Measured in: F1 generation), Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, NA F1 generation	Unmeasured	0 uM / 1 uM / 10 uM / 100 uM / 500 uM	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEL (500 uM)	Mortality	Medium	5043459

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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
84-74-2	4 Day(s), (4 Day(s))	*Caenorhabditis elegans* (Nematode), Larva (Measured in: Embryo), Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, NA Embryo	Unmeasured	0 uM / 1 uM / 10 uM / 100 uM / 500 uM	Reproduction (Reproduction-Hatch, Response Site: Not reported)	NOEL (10 uM)	Reproductive/Teratogenic	Medium	5043459
84-74-2	4 Day(s), (4 Day(s))	*Caenorhabditis elegans* (Nematode), Larva (Measured in: Adult), Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, 10-11 Adult	Unmeasured	0 uM / 1 uM / 10 uM / 100 uM / 500 uM	Reproduction (Reproduction-Progeny counts/numbers, Response Site: Not reported)	NR (1-500 uM)	Reproductive/Teratogenic	Medium	5043459
84-74-2	4 Day(s), (4 Day(s))	*Caenorhabditis elegans* (Nematode), Larva (Measured in: Embryo), Not Reported, Laboratory (NR)	Culture, Environmental, Culture medium, NA Embryo	Unmeasured	0 uM / 1 uM / 10 uM / 100 uM / 500 uM	Reproduction (Reproduction-Hatch, Response Site: Not reported)	LOEL (100 uM)	Reproductive/Teratogenic	Medium	5043459
84-74-2	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 / 500 ppm / 1000 ppm	Behavior (Behavior-Distance moved, change in direct movement, Response Site: Not reported)	LOEL (500 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
84-74-2	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 / 500 ppm / 1000 ppm	Behavior (Behavior-Movements, number of, Response Site: Not reported)	LOEL (500 ppm)	Behavioral	High	2215375
84-74-2	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 / 500 ppm / 1000 ppm	Behavior (Behavior-Reversals, Response Site: Not reported)	LOEL (500 ppm)	Behavioral	High	2215375
84-74-2	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 / 500 ppm / 1000 ppm	Biochemical (Biochemistry-Reactive oxygen species, Response Site: Not reported)	LOEL (500 ppm)	Mechanistic: Oxidative stress (including redox biology)	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
84-74-2	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 / 500 ppm / 1000 ppm	Cellular (Cell(s)-Size, Response Site: Neuron)	LOEL (500 ppm)	Mechanistic	High	2215375
84-74-2	24 Hour(s), (48 Hour(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Filter paper, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/cm2 / 1 mg/cm2 / 2 mg/cm2 / 10 mg/cm2 / 25 mg/cm2 / 50 mg/cm2 / 75 mg/cm2 / 100 mg/cm2	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (9.78 (9.43-10.27) mg/cm2)	Mortality	Medium	2816887
84-74-2	48 Hour(s), (48 Hour(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Filter paper, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/cm2 / 1 mg/cm2 / 2 mg/cm2 / 10 mg/cm2 / 25 mg/cm2 / 50 mg/cm2 / 75 mg/cm2 / 100 mg/cm2	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (6.8 (6.73-7.42) mg/cm2)	Mortality	Medium	2816887
84-74-2	48 Hour(s), (48 Hour(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Filter paper, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/cm2 / 1 mg/cm2 / 2 mg/cm2 / 10 mg/cm2 / 25 mg/cm2 / 50 mg/cm2 / 75 mg/cm2 / 100 mg/cm2	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (1 mg/cm2)	Mortality	Medium	2816887

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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
84-74-2	7 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Enzyme(s)-Glutathione peroxidase, Response Site: Whole organism)	NR (5-100 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	7 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Biochemistry-Glutathione (reduced glutathione), Response Site: Whole organism)	NOEL (10 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	7 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Whole organism)	NOEL (100 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	7 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Whole organism)	NR (5-100 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	7 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Enzyme(s)-Peroxidase activity, Response Site: Whole organism)	NR (5-100 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887

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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
84-74-2	7 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Biochemistry-Glutathione (reduced glutathione), Response Site: Whole organism)	LOEL (50 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	7 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Enzyme(s)-Catalase, Response Site: Whole organism)	NR (5-100 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	14 Day(s), (14 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 500 mg/kg dry soil / 1000 mg/kg dry soil / 2000 mg/kg dry soil / 5000 mg/kg dry soil / 10000 mg/kg dry soil	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (500 mg/kg dry soil)	Mortality	Medium	2816887
84-74-2	14 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Whole organism)	NOEL (10 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	14 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Enzyme(s)-Peroxidase activity, Response Site: Whole organism)	LOEL (10 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887

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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
84-74-2	14 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Enzyme(s)-Peroxidase activity, Response Site: Whole organism)	NOEL (5 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	14 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Enzyme(s)-Catalase, Response Site: Whole organism)	NR (5-100 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	14 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Enzyme(s)-Glutathione peroxidase, Response Site: Whole organism)	NR (5-100 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	14 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Whole organism)	LOEL (50 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	14 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Whole organism)	LOEL (5 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887

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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
84-74-2	14 Day(s), (14 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 500 mg/kg dry soil / 1000 mg/kg dry soil / 2000 mg/kg dry soil / 5000 mg/kg dry soil / 10000 mg/kg dry soil	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-LETH (10000 mg/kg dry soil)	Mortality	Medium	2816887
84-74-2	14 Day(s), (14 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 500 mg/kg dry soil / 1000 mg/kg dry soil / 2000 mg/kg dry soil / 5000 mg/kg dry soil / 10000 mg/kg dry soil	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (2364.8 (2319.5-2509.1) mg/kg dry soil)	Mortality	Medium	2816887
84-74-2	14 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Biochemistry-Glutathione (reduced glutathione), Response Site: Whole organism)	NR (5-100 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	21 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Biochemistry-Glutathione (reduced glutathione), Response Site: Whole organism)	LOEL (5 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	21 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Whole organism)	NR (5-100 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887

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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
84-74-2	21 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Enzyme(s)-Catalase, Response Site: Whole organism)	NR (5-100 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	21 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Whole organism)	NR (5-100 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	21 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Enzyme(s)-Glutathione peroxidase, Response Site: Whole organism)	NOEL (5 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	21 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Enzyme(s)-Glutathione peroxidase, Response Site: Whole organism)	LOEL (10 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	21 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Enzyme(s)-Peroxidase activity, Response Site: Whole organism)	NOEL (10 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887

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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
84-74-2	21 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Enzyme(s)-Peroxidase activity, Response Site: Whole organism)	LOEL (50 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	28 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Enzyme(s)-Peroxidase activity, Response Site: Whole organism)	NR (5-100 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	28 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Biochemistry-Glutathione (reduced glutathione), Response Site: Whole organism)	NOEL (10 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	28 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Enzyme(s)-Glutathione peroxidase, Response Site: Whole organism)	NR (5-100 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	28 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Whole organism)	NOEL (5 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887

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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
84-74-2	28 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Biochemistry-Glutathione (reduced glutathione), Response Site: Whole organism)	LOEL (50 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	28 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Enzyme(s)-Superoxide dismutase (SOD) enzyme activity, Response Site: Whole organism)	LOEL (10 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	28 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Biochemistry-Malondialdehyde, Response Site: Whole organism)	LOEL (5 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	28 Day(s), (28 Day(s))	*Eisenia fetida* (Earthworm), Adult, Not Reported, Laboratory (SHANDONG AGRICULTURAL UNIVERSITY)	Artificial soil, Environmental, Environmental, unspecified, Not Reported	Unmeasured	0 mg/kg dry soil / 5 mg/kg dry soil / 10 mg/kg dry soil / 50 mg/kg dry soil / 100 mg/kg dry soil	Biochemical (Enzyme(s)-Catalase, Response Site: Whole organism)	LOEL (5 mg/kg dry soil)	Mechanistic: Biomarkers (exposure and effect); Oxidative stress (including redox biology)	Medium	2816887
84-74-2	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 (1360 (1050-1750) ug/cm2)	Mortality	Medium	3625226

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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
84-74-2	3 Hour(s), (3 Hour(s))	*Meloidogyne incognita* (Southern Root-Knot Nematode), Juvenile, Not Reported, Laboratory (INSTITUTE OF PLANT PROTECTION, SHENYANG AGRICULTURAL UNIVERSITY, SHENYANG, P. R. CHINA)	Culture, Environmental, Culture medium, NA Juvenile	Unmeasured	0 mmol/L / 0.5 mmol/L / 1.0 mmol/L / 2.0 mmol/L	Behavior (Avoidance-Chemical avoidance, Response Site: Not reported)	LOEL (0.5 mmol/L)	Behavioral	Medium	3350275
84-74-2	24 Hour(s), (48 Hour(s))	*Meloidogyne incognita* (Southern Root-Knot Nematode), Juvenile, Not Reported, Laboratory (INSTITUTE OF PLANT PROTECTION, SHENYANG AGRICULTURAL UNIVERSITY, SHENYANG, P. R. CHINA)	Aqueous, Environmental, Aqueous, NA Juvenile	Unmeasured	0 mmol/L / 0.5 mmol/L / 1.0 mmol/L / 2.0 mmol/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (0.5-2.0 mmol/L)	Mortality	Low	3350275
84-74-2	48 Hour(s), (48 Hour(s))	*Meloidogyne incognita* (Southern Root-Knot Nematode), Juvenile, Not Reported, Laboratory (INSTITUTE OF PLANT PROTECTION, SHENYANG AGRICULTURAL UNIVERSITY, SHENYANG, P. R. CHINA)	Aqueous, Environmental, Aqueous, NA Juvenile	Unmeasured	0 mmol/L / 0.5 mmol/L / 1.0 mmol/L / 2.0 mmol/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR (0.5-2.0 mmol/L)	Mortality	Low	3350275

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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
84-74-2	8 Day(s), (8 Day(s))	*Meloidogyne incognita* (Southern Root-Knot Nematode), Egg (Measured in: Juvenile), Not Reported, Laboratory (INSTITUTE OF PLANT PROTECTION, SHENYANG AGRICULTURAL UNIVERSITY, SHENYANG, P. R. CHINA)	Aqueous, Environmental, Aqueous, NA Juvenile	Unmeasured	0 mmol/L / 0.5 mmol/L / 1.0 mmol/L / 2.0 mmol/L	Population (Population-Abundance, Response Site: Not reported)	NR (0.5-2.0 mmol/L)	Development/Growth	Low	3350275
84-74-2	40 Day(s), (40 Day(s))	*Meloidogyne incognita* (Southern Root-Knot Nematode), Juvenile, Not Reported, Laboratory (INSTITUTE OF PLANT PROTECTION, SHENYANG AGRICULTURAL UNIVERSITY, SHENYANG, P. R. CHINA)	Natural soil, Environmental, Direct application, Not Reported	Unmeasured	0 mmol/L / 0.5 mmol/L / 1.0 mmol/L / 2.0 mmol/L	Population (Population-Abundance, Response Site: Not reported)	LOEL (0.5 mmol/L)	Development/Growth	Medium	3350275

* 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: Fungi Extraction Table

CASRN	Exposure and Overall Duration	Test Organism Species, Age, Sex, Source	Exposure Media, Route Grouping, Type, Sample Number	Test Analysis Exposure Parameters	Dose/ Concentration for Each Main Group of the Study	Health Effect as reported by the Study Author(s)	Effect Level as reported by the Study Author(s)*	Health Outcome Identified by the Assessor	Overall Quality Determination	HERO ID
84-74-2	20 Day(s), (60 Day(s))	*Acaulospora laevis* (Fungus), Not reported, Not Reported, Wild (FROM ECOLOGICAL EXPERIMENTAL STATION OF RED SOIL, YINGTAN, CHINA)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Population (Population-Colonization rate, Response Site: Not reported)	LOEL (100 mg/kg soil)	Development/Growth	Medium	5495799
84-74-2	20 Day(s), (60 Day(s))	*Acaulospora laevis* (Fungus), Not reported, Not Reported, Wild (FROM ECOLOGICAL EXPERIMENTAL STATION OF RED SOIL, YINGTAN, CHINA)	Natural soil, Environmental, Present in soil, Not Reported	Unmeasured	0 mg/kg soil / 10 mg/kg soil / 100 mg/kg soil	Population (Population-Colonization rate, Response Site: Not reported)	NOEL (10 mg/kg soil)	Development/Growth	Medium	5495799

* 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
84-74-2	119 days, (17 weeks)	Rat (Rattus norvegicus), Sampling Age:NR Exposure Age: GestationF, Sprague-Dawley	Gavage	Gas chromatography	80/385/794 mg/kg-bw/day	80 mg/kg-bw/day	Pup weight at birth	Reproduction	High	680063

Dibutyl 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 study did not report which, if any compliance guidelines were adhered to. Rat-Albino - [rat]-Female	Oral-Gavage-Duration: Short-term (>1-30 days)-1-F0 - gestation (GD 14-parturition) Pregnant rats were exposed from GD14 until parturition	**POD: 2 mg/kg-bw/day (LOAEL) -Developmental** n= 6 Dose= 0, n= 6 Dose= 2, n= 6 Dose= 10, Dose= 50, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 14- parturition	See footnotes for full summary [1]	Number of animals treated/ examined were not fully reported. Purity of test substance was not reported.General husbandry (e.g., temp, humidity, dark cycle.) procedure was not mentioned	Nutritional/Metabolic-Body weight of dams-Other (please specify below) (Clinical signs)-Clinical signs of toxicity in dams-Reproductive/Developmental-PND1 (Litter size, sex ratio, and number of live and dead pups), PND 4 (viability index), PND 21 (weaning index). Gross external abnormalities, devel-opment landmarks (eye opening, fur formation, pinna detachment, testis descent), AGD; PND 5 and PND 25, pup body weight, PND 75: male offspring organ weights (testes, epididymis, prostate, vas deference, and seminal vesicle, liver, kidney, and adrenal gland), sperm quality parameters (sperm motility, sperm count, testicular spermatid count, daily sperm production, and sperm head shape abnormal-ity), 17β-hydroxy steroidehydrogenase levels in testis, serum testosterone levels.-Mortality-Mortality of dams; Medium	Ahmad et. al 2014 2219796

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Dibutyl 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 study was GPL compliant. Rat-Fischer 344 - [rat]-Both	Oral-Diet-Duration: Short-term (>1-30 days)-7-24-21-day(s) 24 hours/day 7 days/week 21 day(s) Animals were fed diet containing test substance for 21 days	**POD: 639 mg/kg-bw/day (LOAEL) -Increased liver weight, decreased serum triglyceride and cholesterol levels** n= 5 Dose= 0, n= 5 Dose= 639, n= 5 Dose= 1192, n= 5 Dose= 2195, mg/kg-bw/day	See footnotes for full summary [2]	Purity of test substance was not reported. Food intake was significantly reduced (>20% difference from control).	Nutritional/Metabolic-Body weight and food intake-Hepatic/Liver-Liver weight and histology. Serum triglyceride and total cholesterol. Biochemical analysis of liver (cyanide-insensitive palmitoyl-CoA oxidation and protein concentration; microsomal fraction rate of lauric acid 11-hydroxylase and 12-hydroxylase activity) and ultrastructure of liver assessing peroxisome proliferation (TEM); Uninformative	BIBRA, 1986 1325511
The study was GPL compliant. Rat-Fischer 344 - [rat]-Both	Oral-Diet-Duration: Short-term (>1-30 days)-7-24-21-day(s) 24 hours/day 7 days/week 21 day(s) Animals were fed diet containing test substance for 21 days	**POD: 1149 mg/kg-bw/day (LOAEL) -Increased liver weight, decrease in serum triglyceride and total cholesterol, increased incidence of reduced cytoplasmic basophilia in the liver** n= 40 Dose= 0, n= 40 Dose= 1149, mg/kg-bw/day	See footnotes for full summary [3]	Purity of test substance was not reported. Food intake was significantly reduced (>20% difference from control).	Nutritional/Metabolic-Body weight and food intake-Hepatic/Liver-Liver weight and histology. Serum triglyceride and total cholesterol. Biochemical analysis of liver (cyanide-insensitive palmitoyl-CoA oxidation and protein concentration; microsomal fraction rate of lauric acid 11-hydroxylase and 12-hydroxylase activity) and ultrastructure of liver assessing peroxisome proliferation (TEM); Medium	BIBRA, 1986 1325511

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Dibutyl 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 study was GPL compliant. Rat-Fischer 344 - [rat]-Both	Oral-Diet-Duration: Short-term (>1-30 days)-7-24-21-day(s) 24 hours/day 7 days/week 21 day(s) Animals were fed diet containing test substance for 21 days	**POD: 1149 mg/kg-bw/day (LOAEL) -Increased liver weight, decrease in serum triglyceride and total cholesterol, increased incidence of reduced cytoplasmic basophilia in the liver** n= 40 Dose= 0, n= 40 Dose= 1149, mg/kg-bw/day	See footnotes for full summary [4]	Purity of test substance was not reported. Food intake was significantly reduced (>20% difference from control).	Nutritional/Metabolic-Body weight and food intake-Hepatic/Liver-Liver weight and histology. Serum triglyceride and total cholesterol. Biochemical analysis of liver (cyanide-insensitive palmitoyl-CoA oxidation and protein concentration; microsomal fraction rate of lauric acid 11-hydroxylase and 12-hydroxylase activity) and ultrastructure of liver assessing peroxisome proliferation (TEM); Uninformative	BIBRA, 1986 1325511

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Dibutyl 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 authors do not report adherence to a guideline, but the study is similar to what is described in OECD TG 414. Rat-Sprague-Dawley - [rat]-Female	Oral-Gavage-Duration: Short-term (>1-30 days)-F0 - gestation (GD12-GD20) This experiment is labeled as the dose-response study and all animals were euthanized on GD21	**POD: 30 mg/kg-bw/day (LOAEL) -Reduced testis size and decreased number of total cells per testis.** n= 10 Dose= 0, n= 5 Dose= 0.1, n= 5 Dose= 1, n= 5 Dose= 10, n= 5 Dose= 30, n= 5 Dose= 50, n= 4 Dose= 100, n= 5 Dose= 500, mg/kg-bw/day Female Exposure: F0 - gestation, GD12-GD20	Pregnant female Sprague-Dawley rats (4-10 /group) were exposed to 0, 0.1, 1, 10, 30, 50, 100 or 500 mg/kg/day of di(n-butyl) phthalate (DBP) via gavage in corn oil vehicle over 8 days from GD12 to GD20. Endpoints were evaluated in the male fetuses from euthanized dams on GD21. The right testis from two fetuses per litter was used to assess testis volume, size and testis histopathology and morphometry, including H and E staining. Transverse sections were used to obtain cell counts and cell density of tubular, interstitial and tunica cells per testis. Number of multinucleated gonocytes (MNGs) per testis cross section were evaluated. Histopathological changes included decreased testis size at doses of 30 mg/kg/day and higher, increased size and abnormal shape of seminiferous tubules at doses of 50 mg/kg/day and higher and increased MNGs at doses of 100 mg/kg/day and higher. Significantly decreased testis volume (by ~50%) and number of tubular cross-sections (by ~37%) were observed at doses of 50 mg/kg/day and higher. Significantly decreased number of total cells per testis (by ~40%) were observed at doses of 30 mg/kg/day and higher. A LOAEL of 30 mg/kg/day and a NOAEL of 10 mg/kg/day was determined for reduced testis size and decreased number of total cells per testis.	Major limitations include low sample size, lack of information on potentially relevant confounding variables such as body weights, and there is no indication that animals were randomly assigned to groups.	Reproductive/Developmental- Offspring testis histopathology, testis morphometry (cells/testis, testis volume, number of tubular cross-sections, BRDU, TUNEL positive cells/testis and and multinucleated gonocytes (MNG)/testis) assessed from GD17 to PND2; Medium	Boekelheide et. al 2009 675560

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Dibutyl 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
None Rat-Sprague-Dawley - [rat]-Male	nan 1 days/week 4 week(s) Animals were treated 4 weeks, although it doesn't specifically say 7 days/week.	**POD: 500 mg/kg-bw/day (LOAEL) -Male reproductive effects (decreased sperm counts/motility)** n= 6 Dose= 0, n= 6 Dose= 500, mg/kg-bw/day	Male SD rats (5-6/group) were exposed by oral gavage to one of multiple phthalates, including BBP, DEHP, DBP, DIDP, and DINP. It is assumed that animals were exposed one time per day, 7 days per week for 4 weeks, although it is not explicitly stated. Negative controls were exposed to corn oil (vehicle) only. Animals were monitored for clinical signs and mortality, and body weights were measured every three days. Urinalysis was collected, and following euthanasian, blood was collected for hematology and serum chemistry parameters. Organ weights and sperm quality were also analyzed.No animals died during the exposure period, and the only clinical sign observed was salivation. Body weights were decreased starting at 2 weeks of exposure in animals exposed to BBP, DBP, and DINP, but not in animals exposed to DEHP or DIDP, and no differences in food consumption were measured in any group. Increased relative liver weights were observed in animals exposed to BBP, DBP, DEHP, DIDP, and DINP, while relative testis weights were decreased and relative thymus weights were increased in animals exposed to DEHP. No other organ weight changes were observed. Animals exposed to DBP and DIDP had altered hematology parameters, while animals exposed to DEHP, DBP, DINP, and DIDP had altered serum chemistry parameters. Urinalysis results were not shown, but text stated that animals exposed to DIDP add altered results. Sperm counts and motility were decreased in animals exposed to BBP, DEHP, DBP, DIDP, and DINP. The only dose examined (500 mg/kg/day) was the LOAEL for male reproductive effects.	The major limitation of this study is the lack of reporting. Very little information is provided on the exposure methods, test substance preparation, number of animals per group, and dosing frequency. The urinalysis information was also not reported.	Reproductive/Developmental-Testis and epididymis weights, sperm count and motility; Medium	Kwack et. al-2009 697382

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Dibutyl 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
Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Rat-Sprague-Dawley - [rat]-Both	Oral-Diet-Duration: Short-term (>1-30 days)-7-14-day(s) 7 days/week 14 day(s) 12. DBP Dose range-finding study in rats: Male and female rats were exposed to DBP in feed for 7 days/week for 14 days.	**POD: 980 mg/kg-bw/day (NOAEL) -Decreased body weight in females** n= 8 Dose= 0, n= 8 Dose= 70, n= 8 Dose= 350, n= 8 Dose= 700, n= 8 Dose= 980, n= 8 Dose= 1150, mg/kg-bw/day	See footnotes for full summary [5]	Major limitations of this study included potential confounding factors (evidence of decreased food palatability among DBP-exposed rats), lack of detail on methods for measuring some outcomes (e.g., frequency of clinical observations), and some missing statistical comparisons.	Nutritional/Metabolic-Terminal body weights (Studies 1, 2, 3, and 4).Body weight, feed consumption (Studies 5, 6, 7, 8, 9, 10, 11, and 12).Body weight gain (Studies 5, 6, 7, and 12).; Medium	Marsman et. al 1995 680063

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Dibutyl 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
Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Rat-Sprague-Dawley - [rat]-Both	Oral-Diet-Duration: Short-term (>1-30 days)-7-14-day(s) 7 days/week 14 day(s) 12. DBP Dose range-finding study in rats: Male and female rats were exposed to DBP in feed for 7 days/week for 14 days.	**POD: 980 mg/kg-bw/day (NOAEL) -Decreased body weight in females** n= 8 Dose= 0, n= 8 Dose= 70, n= 8 Dose= 350, n= 8 Dose= 700, n= 8 Dose= 980, n= 8 Dose= 1150, mg/kg-bw/day	See footnotes for full summary [6]	Major limitations of this study included potential confounding factors (evidence of decreased food palatability among DBP-exposed rats), lack of detail on methods for measuring some outcomes (e.g., frequency of clinical observations), and some missing statistical comparisons.	Nutritional/Metabolic-Terminal body weights (Studies 1, 2, 3, and 4).Body weight, feed consumption (Studies 5, 6, 7, 8, 9, 10, 11, and 12).Body weight gain (Studies 5, 6, 7, and 12).; High	Marsman et. al 1995 680063
The authors did not report adherence to any guidelines. Rat-Other (Wistar albino)-Male	Oral-Gavage-Duration: Short-term (>1-30 days)-15-day(s) 15 day(s)	**POD: 250 mg/kg-bw/day (LOAEL) -Seminiferous tubule degeneration and altered testicular enzyme activity.** n= 6 Dose= 0, n= 6 Dose= 250, n= 6 Dose= 500, n= 6 Dose= 1000, mg/kg-bw/day	See footnotes for full summary [7]	Limitations of this study include a somewhat low sample size, and lack of justification of their exposure duration and chosen doses.	Reproductive/Developmental-Testes organ weight, testes histopathology, testicular enzyme activity; Medium	Srivastava et-al 1990 790214
Non-guideline study; GLP not specified. Rat-Wistar - [rat]-Male	Oral-Gavage-Duration: Short-term (>1-30 days)-7-15-day(s) 7 days/week 15 day(s) Animals were dosed daily for 15 days	**POD: mg/kg-bw/day (Other) -** n= 6 Dose= 250, n= 6 Dose= 500, n= 6 Dose= 1000, mg/kg-bw/day	See footnotes for full summary [8]	This study failed to use a concurrent oral control. Control animals received intravenous injections in an oral gavage study.	Reproductive/Developmental-Testes and epididymis weights, Sperm count, testes histopathology, Testes enzymes (SDH, LDH, G6PDH, gamma -GGT, acid phosphatase, beta-glucuronidase), testes protein content.; Uninformative	Srivastava et-al 1990 790212
Non-guideline study; GLP not specified. Rat-Wistar - [rat]-Male	Oral-Gavage-Duration: Short-term (>1-30 days)-7-15-day(s) 7 days/week 15 day(s) Animals were dosed daily for 15 days	**POD: mg/kg-bw/day (Other) -** n= 6 Dose= 250, n= 6 Dose= 500, n= 6 Dose= 1000, mg/kg-bw/day	See footnotes for full summary [9]	This study failed to use a concurrent oral control. Control animals received intravenous injections in an oral gavage study.	Reproductive/Developmental-Testes and epididymis weights, Sperm count, testes histopathology, Testes enzymes (SDH, LDH, G6PDH, gamma -GGT, acid phosphatase, beta-glucuronidase), testes protein content.; Uninformative	Srivastava et-al 1990 790212

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Dibutyl 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 compliance not specified. Rat-Sprague-Dawley - [rat]-Male	Oral-Gavage-Duration: Short-term (>1-30 days)-7-30-day(s) 7 days/week 30 day(s) Animals were dosed by gavage for 30 days.	**POD: 250 mg/kg-bw/day (NOAEL) -Reproductive effects in testes (histopathology, organ weights, etc)** n= 16 Dose= 0, n= 16 Dose= 250, n= 16 Dose= 500, n= 16 Dose= 1,000, n= 16 Dose= 2,000, mg/kg-bw/day	See footnotes for full summary [10]	This study had some data reporting limitations (ie., sample sizes, and only qualitative results for histopathology). The study reports relative testis weight without corresponding data on absolute testis weight. Relative testis weight is a potentially unreliable metric for testicular toxicity because testis and body weight are not proportional.	Reproductive/Developmental Apical: Serum testosterone, relative organ weights (testes epididymis), testes histopathology; Mechanistic: protein and gene expression in the testes; Low	Xiao-Feng et-al 2009 676594
Non-guideline study; GLP compliance not specified. Rat-Sprague-Dawley - [rat]-Male	Oral-Gavage-Duration: Short-term (>1-30 days)-7-30-day(s) 7 days/week 30 day(s) Animals were dosed by gavage for 30 days.	**POD: 250 mg/kg-bw/day (NOAEL) -Reproductive effects in testes (histopathology, organ weights, etc)** n= 16 Dose= 0, n= 16 Dose= 250, n= 16 Dose= 500, n= 16 Dose= 1,000, n= 16 Dose= 2,000, mg/kg-bw/day	See footnotes for full summary [11]	This study had some data reporting limitations (ie., sample sizes, and only qualitative results for histopathology). The study reports relative testis weight without corresponding data on absolute testis weight. Relative testis weight is a potentially unreliable metric for testicular toxicity because testis and body weight are not proportional.	Reproductive/Developmental Apical: Serum testosterone, relative organ weights (testes epididymis), testes histopathology; Mechanistic: protein and gene expression in the testes; Low	Xiao-Feng et-al 2009 676594
Non-guideline study; GLP compliance not specified. Rat-Sprague-Dawley - [rat]-Male	Oral-Gavage-Duration: Short-term (>1-30 days)-7-30-day(s) 7 days/week 30 day(s) Animals were dosed by gavage for 30 days.	**POD: 250 mg/kg-bw/day (NOAEL) -Reproductive effects in testes (histopathology, organ weights, etc)** n= 16 Dose= 0, n= 16 Dose= 250, n= 16 Dose= 500, n= 16 Dose= 1,000, n= 16 Dose= 2,000, mg/kg-bw/day	See footnotes for full summary [12]	This study had some data reporting limitations (ie., sample sizes, and only qualitative results for histopathology). The study reports relative testis weight without corresponding data on absolute testis weight. Relative testis weight is a potentially unreliable metric for testicular toxicity because testis and body weight are not proportional.	Reproductive/Developmental Apical: Serum testosterone, relative organ weights (testes epididymis), testes histopathology; Mechanistic: protein and gene expression in the testes; Medium	Xiao-Feng et-al 2009 676594

* Overall Quality Determination

[1] 2219796: Pregnant albino rats (at least 6/group; not specified) were administered 0, 2, 10, or 50 mg/kg/day of di-butyl phthalate (DBP) in corn oil via gavage from gestational day (GD) 14 up to parturition. An untreated control and a positive control (6 ug/kg diethylstilbestrol) group were also included. Dams were allowed to deliver naturally. Dams were monitored for clinical signs of toxicity, weight gain and gestation length. Endpoints evaluated included litter size, sex ratio, and number of live and dead pups on PND 1 (live birth index), PND 4 (viability index), and PND 21 (weaning index). Pups were examined for gross external abnormalities, physical development landmarks (eye opening, fur formation, pinna detachment, and testis descend), anogenital distance (AGD; PND 5 and PND 25), pups body weight (PND 1, PND 21, and biweekly thereafter until PND 75). On PND 75, representative number of male animals from each dam were sacrificed (not specified). Endpoints evaluated in sacrificed males included organ weights (testes, epididymis, prostate, vas deference, and seminal vesicle, liver, kidney, and adrenal gland), sperm quality parameters (sperm motility, sperm count, testicular spermatid count, daily sperm production, and sperm head shape abnormality), 17β-hydroxy steroidehydrogenase (HSD) levels in testis, and serum testosterone levels. No dams died during treatment. Clinical signs were not reported. Body weight gain was significantly decreased (~7%, 8%, and 9%) in the 2, 10, and 50 mg/kg/day, respectively from untreated control group on GD 21. Gestation length was significantly increased in all dosed groups (~21.25 days in control, ~21.6 days in vehicle control; ~22.5, 22.75, and 23.1 days at 2, 10, 50 mg/kg/day, respectively) compared to control. No significant difference in litter size, live pups/litter, fetal mortality, sex ratio, live birth index, viability index, weanling index, AGD in males on PND 5 and 25 from control. Male body weights were significantly decreased on PND 1 (5% and 2%) at 10 and 50 mg/kg/day, respectively; and PND 21 (6%, 16%, and 14%) at 2, 10, and 50 mg/kg/day, respectively compared to control. No significant difference in age of developmental landmarks (pinna detachment, fur formation, eye opening, and testis descend) compared to control. On PND 75, significant decreases in body weight (5%), and absolute epididymis (12%), testis (3%), prostate (15%), seminal vesicle (13%), adrenal gland (14%), liver (7%), and kidney (7%) weight at 50 mg/kg/day and absolute kidney weight at 2 mg/kg/day (4%) compared to control. Significant decreases in cauda epididymal sperm count (10%) and percentage of motile sperm (4%) were seen in the 50 mg/kg/day group compared to control. The percentage of sperm abnormalities was significantly increased from 1.12% in control to 1.66% in the 50 mg/kg/day. No significant difference in spermatid count or daily sperm production compared to control. No significant difference in 17-b-HSD activity in the testis compared to control. No significant difference in serum testosterone was seen compared to control. The positive control group gave expected results. No significant differences were seen between the untreated control and vehicle control group. A LOAEL of 2 mg/kg/day was determined by this reviewer.

[2] 1325511: Fisher 344 rats (5/sex/group) were provided a diet containing 0, 0.3, 1.2, 2.5% DINP for 21 days. Authors calculated mean DINP intake based on food intake and body weight as 639, 1192, and 2195 mg/kg/day in males and 607, 1193, 2289 mg/kg/day in females at 0, 0.3, 1.2, 2.5% DINP in diet, respectively. Endpoints evaluated included clinical signs (daily), body weight (days: -3, 0, 3, 7, 10, 14, 17, and 20), food intake (measured in intervals from days: -3 to 0; 0-3; 3-7; 7-10; 10-14; 14-17; and 17-20), serum concentrations of triglyceride and total cholesterol, gross necropsy, organ weights (liver, kidney, and testes), histopathology (liver, kidney, and testes), biochemical analysis of liver (cyanide-insensitive palmitoyl-CoA oxidation levels and protein concentration; microsomal fraction rate of lauric acid hydroxylation) and ultrastructure of liver to assess peroxisome proliferation (TEM; one negative control, 2 positive controls and 2 from high-dose groups). A positive control group was also included in which rats (n=5/sex) were fed 1.2% DEHP (1084 mg/kg/day for males and 896 mg/kg/day for females).The study did not report that any animals died, and all animals were accounted for in the results. Clinical signs were not reported. Body weights were significantly decreased in mid-dose males (6-12%) from days 7-20 and high-dose males (10-28%) from days 3-20; and in females in the mid-dose group (6-7%) on days 7-10 and high-dose group (9-14%) on days 3-20. Terminal body weights were significantly decreased in males (13% and 30%) in mid-and high-dose groups, respectively and in high-dose females (16%) compared to control. Food intake in males was decreased in (10-14%) on day 7-20 in the mid-dose groups. In the high-dose group, food intake was decreased the first 3 days 48% in males and 41% in females; food intake in males remained decreased (19-36%) for the remainder of the study in males but returned to control levels in females. Serum triglycerides were significantly decreased in males (24%, 42% and 48%) in the low-, mid-, and high-dose groups, respectively and in females (23% and 26%) in the mid- and high dose groups compared to control. Serum total cholesterol levels were significantly decreased in males (24%, 32%, and 9%) and females (24%, 15%, and 14%) in the low-, mid-, and high-dose groups, respectively. Significant increases in absolute liver weight were seen in males (36%, 50% and 65%) and females (24%, 64%, and 98%) and relative liver weight in males (36%, 73%, 132%) and females (31%, 75% and 137%) in the low-, mid- and high-dose groups, respectively compared to control. Absolute kidney weights in males were significantly increased 14% in the low-dose group and decreased in the high-dose group (13%) compared to control. No significant differences in absolute kidney weight were seen in females compared to control. Relative kidney weights were increased in males (15%, 22% and 24%) and females (7%, 8% and 14%) in the low-, mid-, and high-dose groups respectively compared to control. Relative (but not absolute) testis weight was significantly increased 35% in the high-dose group compared to control; this may be a reflection of the severe decrease in body weight in this group. In the liver cyanide-insensitive palmitoyl-CoA oxidation levels were significantly increased in males (5-fold and 10-fold) and females (4-fold and 11-fold) in mid- and high-dose groups, respectively compared to control. In males, significant increases in the activities of lauric acid 11-hydroxylase (2-fold, 3-fold, and 3-fold) and lauric acid 12-hydroxylase (5-fold, 8-fold, and 10-fold) in the low-, mid- and high-dose groups, respectively compared to control. In the high-dosed females, significant increases in the activities of lauric acid 11-hydroxylase (5-fold) and lauric acid 12-hydroxylase (8-fold) were seen in the liver compared to control. Total protein levels in the liver were significantly increased in males (8%, 10%, and 18%) and females (19%, 20%, and 23%) in the low-, mid, and high-dose group. Microsomal protein levels were significantly in females (17% and 17%) in the low- and mid-dose groups respectively compared to control. In the high-dose group, histological examination of liver showed increased incidences of reduction cytoplasmic basophilia and increased cytoplasmic eosinophilia in 5/5 males and 5/5 females compared 0/5 males and females in controls. In the mid-dose group, increased incidences of reduction cytoplasmic basophilia was seen in 5/5 males and 5/5 females compared to 0/5 in controls. Proliferation of centrilobular and periportal peroxisomes were very markedly increase in males and markedly increase in females compared to control.In the positive control DEHP group, expected effects on the liver were observed (increased liver weights, decreased serum triglycerides and total cholesterol increased liver PCoA levels and lauric acid 11 and 12 hydroxylase activities, reduction in cytoplasmic basophilia, marked increase in peroxisome proliferation.

[3] 1325511: Fisher 344 rats (5/sex/group) were provided a diet containing 0 or 1.2% DEHP for 21 days. The experiment was repeated 7 times, as rats receiving DEHP served as a positive control group for hepatic peroxisome proliferation experiments performed with different phthalic acid esters. Authors calculated mean DEHP intake for each experiment based on dietary intake. This reviewer averaged the intake for all eight experiments. The mean intake for males was 1149 +/- 64 mg/kg/day and in females as 1115 +/- 117 mg/kg/day for all experiments. Endpoints evaluated included clinical signs (daily), body weight (days-3, 0, 3, 7, 10, 14, 17, and 20), food intake (measured in intervals from days: -3 to 0; 0-3; 3-7; 7-10; 10-14; 14-17; and 17-20), serum concentrations of triglyceride and total cholesterol, gross necropsy, organ weights (liver, kidney, and testes), histopathology (liver, kidney, and testes), biochemical analysis of liver (cyanide-insensitive palmitoyl-CoA oxidation [PCoA] levels and protein concentration; microsomal fraction rate of lauric acid hydroxylation) and ultrastructure of liver to assess peroxisome proliferation).The study did not report that any animals died, and all animals were accounted for in the results. Clinical signs were not reported. Body weights were significantly decreased in males (in 6 out 8 experiments) and females (in 8 out of 8 experiments) compared to control. Food intake was significantly decreased in males (in 7/8 experiments and increased in 1/8 experiments) and females (6/8 experiments and no change in 2/8 experiments) compared to control. In males significant decreases in serum triglycerides (in 6/8 experiments) and total cholesterol (in 8/8 experiments) were seen. In females, no changes in serum triglycerides or total cholesterol were seen in 5/8 experiments; decreases in serum total cholesterol was observed in 3/8 experiments compared to control. A significant increase in absolute and relative liver weights were seen in males and females in all 8 experiments, compared to control. No changes in absolute kidney weights were seen but significant increases in relative kidney weights were observed (males 7/8 experiments; females (in 6/8 experiments) compared to control. These changes may be a reflection of the decreased body weight and not effect on the kidney itself. Changes in testis weights were not consistent between the eight experiments. Absolute and relative testis weights were significantly decreased in 1/8 experiments; increases in relative testis weight were reported in 2/8 experiments; decreases in relative testis weight was reported in 1/8 experiments; no change absolute or relative testis weights were seen in 4/8 experiments compared to control. Histologically, reduction of cytoplasmic basophilia in the liver was observed in 5/5 males and 5/5 females in all 8 experiments. No significant histological changes were seen in the kidneys or testis in male or females in all 8 experiments. Significant increases in liver PCoA levels and lauric acid 11 and 12 hydroxylase activities, and marked increase in peroxisome proliferation were observed in male and female rats after exposure.

[4] 1325511: Fisher 344 rats (5/sex/group) were provided a diet containing 0 or 1.2% DEHP for 21 days. The experiment was repeated 7 times, as rats receiving DEHP served as a positive control group for hepatic peroxisome proliferation experiments performed with different phthalic acid esters. Authors calculated mean DEHP intake for each experiment based on dietary intake. This reviewer averaged the intake for all eight experiments. The mean intake for males was 1149 +/- 64 mg/kg/day and in females as 1115 +/- 117 mg/kg/day for all experiments. Endpoints evaluated included clinical signs (daily), body weight (days-3, 0, 3, 7, 10, 14, 17, and 20), food intake (measured in intervals from days: -3 to 0; 0-3; 3-7; 7-10; 10-14; 14-17; and 17-20), serum concentrations of triglyceride and total cholesterol, gross necropsy, organ weights (liver, kidney, and testes), histopathology (liver, kidney, and testes), biochemical analysis of liver (cyanide-insensitive palmitoyl-CoA oxidation [PCoA] levels and protein concentration; microsomal fraction rate of lauric acid hydroxylation) and ultrastructure of liver to assess peroxisome proliferation).The study did not report that any animals died, and all animals were accounted for in the results. Clinical signs were not reported. Body weights were significantly decreased in males (in 6 out 8 experiments) and females (in 8 out of 8 experiments) compared to control. Food intake was significantly decreased in males (in 7/8 experiments and increased in 1/8 experiments) and females (6/8 experiments and no change in 2/8 experiments) compared to control. In males significant decreases in serum triglycerides (in 6/8 experiments) and total cholesterol (in 8/8 experiments) were seen. In females, no changes in serum triglycerides or total cholesterol were seen in 5/8 experiments; decreases in serum total cholesterol was observed in 3/8 experiments compared to control. A significant increase in absolute and relative liver weights were seen in males and females in all 8 experiments, compared to control. No changes in absolute kidney weights were seen but significant increases in relative kidney weights were observed (males 7/8 experiments; females (in 6/8 experiments) compared to control. These changes may be a reflection of the decreased body weight and not effect on the kidney itself. Changes in testis weights were not consistent between the eight experiments. Absolute and relative testis weights were significantly decreased in 1/8 experiments; increases in relative testis weight were reported in 2/8 experiments; decreases in relative testis weight was reported in 1/8 experiments; no change absolute or relative testis weights were seen in 4/8 experiments compared to control. Histologically, reduction of cytoplasmic basophilia in the liver was observed in 5/5 males and 5/5 females in all 8 experiments. No significant histological changes were seen in the kidneys or testis in male or females in all 8 experiments. Significant increases in liver PCoA levels and lauric acid 11 and 12 hydroxylase activities, and marked increase in peroxisome proliferation were observed in male and female rats after exposure.

[5] 680063: 12.DBP Dose range-finding study in rats. In a dose range-finding study, VAF Crl:CD BR outbred Sprague-Dawley rats (8 rats/sex/group) were exposed to Dibutyl phthalate (DBP, purity >99%) in feed at concentrations of 0, 1,000, 5,000, 10,000, 15,000, or 20,000 ppm for 7 days/week for 14 days. Mean doses based on male body weights and food consumption were reported to be 0, 70, 340, 650, 910, and 1,190 mg/kg-day. Mean doses based on female body weights and food consumption were reported to be 0, 70, 350, 700, 980, and 1,150 mg/kg-day. Animals were observed for mortality and clinical signs of toxicity. Other endpoints evaluated included body weight (on Day 0, 7, and 14), body weight gain (between Day 0 and 14), and feed consumption (during Week 1 and 2). No animals died during the 14-day exposure period. No treatment-related clinical signs were observed. Body weights of females in the 20,000 ppm group were biologically and significantly reduced on Day 7 (13% decreased) and 14 (12% decreased) compared with control. Body weights were also reduced in males at 15,000 ppm and in females at 10,000 ppm and 15,000 ppm on Days 7 and 14, however, these reductions were ≤10% and not dose-related. Body weight gain in males was less than 10% at 20,000 ppm and females in the 20,000 ppm group lost weight from Day 0 to 14. Feed consumption was significantly lower on Week 1 at ≥10,000 ppm males (7-41% decreased compared to control group) and ≥15,000 ppm females (24-42% decreased), however during the second week consumption either significantly increased compared to control (10,000 ppm males) or returned to control levels. The only significant decrease in feed consumption that remained at week 2 was in the 20,000 ppm males (2%). Overall, when combining week 1 and 2 feed consumption, no significant differences from control were seen. Data taken from HERO 1333020.The study authors determined that the maximum tolerated dose was 15,000 ppm. A NOAEL of 15,000 ppm (980 mg/kg-day) and LOAEL of 20,000 ppm (1,150 mg/kg-day) were determined based on decreased body weight in females.

[6] 680063: 12.DBP Dose range-finding study in rats. In a dose range-finding study, VAF Crl:CD BR outbred Sprague-Dawley rats (8 rats/sex/group) were exposed to Dibutyl phthalate (DBP, purity >99%) in feed at concentrations of 0, 1,000, 5,000, 10,000, 15,000, or 20,000 ppm for 7 days/week for 14 days. Mean doses based on male body weights and food consumption were reported to be 0, 70, 340, 650, 910, and 1,190 mg/kg-day. Mean doses based on female body weights and food consumption were reported to be 0, 70, 350, 700, 980, and 1,150 mg/kg-day. Animals were observed for mortality and clinical signs of toxicity. Other endpoints evaluated included body weight (on Day 0, 7, and 14), body weight gain (between Day 0 and 14), and feed consumption (during Week 1 and 2). No animals died during the 14-day exposure period. No treatment-related clinical signs were observed. Body weights of females in the 20,000 ppm group were biologically and significantly reduced on Day 7 (13% decreased) and 14 (12% decreased) compared with control. Body weights were also reduced in males at 15,000 ppm and in females at 10,000 ppm and 15,000 ppm on Days 7 and 14, however, these reductions were ≤10% and not dose-related. Body weight gain in males was less than 10% at 20,000 ppm and females in the 20,000 ppm group lost weight from Day 0 to 14. Feed consumption was significantly lower on Week 1 at ≥10,000 ppm males (7-41% decreased compared to control group) and ≥15,000 ppm females (24-42% decreased), however during the second week consumption either significantly increased compared to control (10,000 ppm males) or returned to control levels. The only significant decrease in feed consumption that remained at week 2 was in the 20,000 ppm males (2%). Overall, when combining week 1 and 2 feed consumption, no significant differences from control were seen. Data taken from HERO 1333020.The study authors determined that the maximum tolerated dose was 15,000 ppm. A NOAEL of 15,000 ppm (980 mg/kg-day) and LOAEL of 20,000 ppm (1,150 mg/kg-day) were determined based on decreased body weight in females.

[7] 790214: Male albino-Wistar rats (6/group) were exposed to 0, 250, 500 or 1000 mg/kg/day of di-n-butyl phthalate (DBP) via oral gavage in ground nut oil vehicle for 15 days. Body weights were measured at the beginning and end of the experiment and animals were monitored for mortality. On day 16, animals were euthanized, and testes were harvested and weighed. The testis was homogenized for biochemical assays, including measurement of sorbitol dehydrogenase (SDH), lactate dehydrogenase (LDH), glucose-6-phosphatase dehydrogenase (G6PDH), gamma-glutamyl transpeptidase (gamma-GGT), beta-glucuronidase and acid phosphatase. The remaining portion of the testis was processed for histopathology which included H and E staining. No deaths were reported over the course of the study. Significantly decreased body weights (by 19%) were observed at doses of 500 mg/kg/day and higher. Significantly decreased absolute and relative testis weights (by 36% and 21% respectively) were observed at doses of 500 mg/kg/day and higher. Biochemical alterations included decreased SDH at doses 500 mg/kg/day and higher, increased LDH, gamma-GGT, beta-glucuronidase and G6PDH but decreased acid phosphatase at doses of 250 mg/kg/day and higher. Histopathological observations included seminiferous tubule degeneration and shrunken tubules with spongy appearance, interstitial edema and defective spermatogenesis in 5% of all tubules at 250 mg/kg/day, in 20% of all tubules at 500 mg/kg/day and in 70% of all tubules at 1000 mg/kg/day. Pycnotic nuclei and multinucleated giant cells were all observed in the seminiferous tubules at 1000 mg/kg/day. A LOAEL for reproductive/developmental effects of 250 mg/kg/day was identified based on degeneration of the seminiferous tubules and altered enzyme activity in the testes. A NOAEL was not determined for reproductive/developmental effects. A LOAEL of 500 mg/kg/day and a NOAEL of 250 mg/kg/day was identified for nutritional/metabolic effects based on decreased body weights.

[8] 790212: In a non-guideline study, adult male Wistar rats (6/group) were administered DBP daily at doses of 250, 500, and 1,000 mg/kg-day, via gavage in 0.4mL groundnut oil. A control group was given an equivalent volume of the vehicle alone via intravenous injection. A concurrent oral control was not included in the study. Animals were observed for mortality. Body weights were measured daily. At the end of the treatment period, the testes and epididymis were weighed. A portion of testes tissues was processed for measurement of the following enzymes: sorbitol dehydrogenase (SDH), lactate dehydrogenase (LDH), ϒ-glutamyl transpeptidase (ϒ-GGT), acid phosphatase, glucose-6-phosphate, and β-glucuronidase. Protein levels in the testes were also measured. Epididymal sperm counts were recorded. Histopathological examinations were conducted on one testis from each animal.No animals died, and no changes in body weights were observed (data not shown). Concentrations of acid phosphatase in testes tissue were significantly reduced in all treatment groups, compared with controls. Other enzyme changes included a significant decrease in SDH, and significant increases in LDH, ϒ-GGT, β-glucuronidase, and glucose-6-phosphate at 500 and 1,000 mg/kg-day. Sperm counts decreased from controls in a dose-dependent manner; the decreases were significant at 500 and 1,000 mg/kg-day (based on a 2-tailed unpaired T-test conducted for this review). Histopathology data were described qualitatively in the text; incidences were not reported. No marked histopathological changes were observed in the 250 mg/kg-day group. At 500 mg/kg-day, seminiferous tubules were disorganized and spermatogenesis was disturbed. The interstitiu was oedematous with dilated and congested blood vessels. At 1,000 mg/kg-day, tubules were severely damaged, and were irregular in shape and size; the diameters were also reduced. The architecture was distorted and disorganized. Little to no spermatozoa were present in the lumen, or damaged spermatogenic cells were observed in tubular spaces. Vacuolar degeneration was noted with sloughing off of the spermatogenic layers. Blood vessels were dilated and congested and interstitial spaces were disorganized. No author-reported toxicity values were provided. A NOAEL and LOAEL were not determined for this review, because the study did not include a proper control group making it impossible to accurately interpret the study results.

[9] 790212: In a non-guideline study, adult male Wistar rats (6/group) were administered DBP daily at doses of 250, 500, and 1,000 mg/kg-day, via gavage in 0.4mL groundnut oil. A control group was given an equivalent volume of the vehicle alone via intravenous injection. A concurrent oral control was not included in the study. Animals were observed for mortality. Body weights were measured daily. At the end of the treatment period, the testes and epididymis were weighed. A portion of testes tissues was processed for measurement of the following enzymes: sorbitol dehydrogenase (SDH), lactate dehydrogenase (LDH), ϒ-glutamyl transpeptidase (ϒ-GGT), acid phosphatase, glucose-6-phosphate, and β-glucuronidase. Protein levels in the testes were also measured. Epididymal sperm counts were recorded. Histopathological examinations were conducted on one testis from each animal.No animals died, and no changes in body weights were observed (data not shown). Concentrations of acid phosphatase in testes tissue were significantly reduced in all treatment groups, compared with controls. Other enzyme changes included a significant decrease in SDH, and significant increases in LDH, ϒ-GGT, β-glucuronidase, and glucose-6-phosphate at 500 and 1,000 mg/kg-day. Sperm counts decreased from controls in a dose-dependent manner; the decreases were significant at 500 and 1,000 mg/kg-day (based on a 2-tailed unpaired T-test conducted for this review). Histopathology data were described qualitatively in the text; incidences were not reported. No marked histopathological changes were observed in the 250 mg/kg-day group. At 500 mg/kg-day, seminiferous tubules were disorganized and spermatogenesis was disturbed. The interstitiu was oedematous with dilated and congested blood vessels. At 1,000 mg/kg-day, tubules were severely damaged, and were irregular in shape and size; the diameters were also reduced. The architecture was distorted and disorganized. Little to no spermatozoa were present in the lumen, or damaged spermatogenic cells were observed in tubular spaces. Vacuolar degeneration was noted with sloughing off of the spermatogenic layers. Blood vessels were dilated and

congested and interstitial spaces were disorganized. No author-reported toxicity values were provided. A NOAEL and LOAEL were not determined for this review, because the study did not include a proper control group making it impossible to accurately interpret the study results.

[10] 676594: In a non-guideline study, male Sprague-Dawley rats (16/group) were dosed daily with DBP (99.5% purity) at 0 (vehicle), 250, 500, 1,000, and 2,000 mg/kg-day, via gavage in corn oil, for 30 days. Eight animals per group were sacrificed at the end of the exposure period (exposure group), and the remaining 8/group were sacrificed after a 15-day recovery period. Animals were purportedly monitored for mortality and clinical signs, although the frequency and method of observations were not specified. Body weights were recorded twice weekly. At necropsy, blood was collected for the measurement of serum testosterone and glucocorticoids. Gene expression levels of 11β-hydroxysteroid dehydrogenase 1 (11β-HSD1), and the steroidogenesis acute regulatory protein (StAR) were measured in the testes and Western blots were conducted to quantify the glucocorticoid receptor (GR) protein levels. Testes, epididymides, and adrenals were weighed. Both testes and adrenals were histopathologically examined. No animals died. After 17 days of exposure, four animals in the 2,000 mg/kg-day group showed evidence of a decrease in normal activity, compared to controls (no further details). Clinical observations in other dose groups were not provided. No significant differences in body weights of treated animals, compared to controls, were observed (data not shown). Serum testosterone decreased in a dose-related manner in exposed animals; the decrease was significant at $\geq$ 500 mg/kg-day. After exposure, serum glucocorticoid concentrations were significantly increased at 1,000 and 2,000 mg/kg-day. Levels of both hormones were comparable to controls in animals allowed to recover. Only relative organ weights, in the absence of terminal body weights, were reported. Immediately after exposure, there was a dose-related decrease in relative testes weights that were significant at $\geq$ 500 mg/kg-day. Epididymis weights were significantly reduced at 1,000 and 2,000 mg/kg-day. After the recovery period, both testes and epididymis relative weights were still decreased, relative to controls, at $\geq$ 1,000 mg/kg-day. No effects on adrenal weights were observed. Except for some representative images from control and high-dose samples, histopathology results were qualitatively described. There was purportedly a reduction in the number of Leydig cells with concomitant decreases in the amount of different spermatogenic cells that the authors noted as being dose-dependent. The effects were observed in the 500, 1,000, and 2,000 mg/kg-day groups with no histopathology at 250 mg/kg-day. Degeneration of seminiferous tubules was also described, although the dose group(s) at which this was observed is not entirely clear. It was noted that the effects "did not improve" in the post-exposure group, but that Leydig cell production increased (dose group(s) not specified). No histopathology was observed in the adrenals. Mechanistic results: Gene expression analysis showed significant increases in the expression of 11β-HSD1 and a significant decrease in StAR expression in the two highest dose groups, compared with controls. GR protein levels were also significantly increased in the 1,000 and 2,000 mg/kg-day groups, compared with controls. There were no gene expression or protein concentration changes in the recovery animals.The study authors did not derive toxicity values. A NOAEL of 250 mg/kg-day and a LOAEL of 500 mg/kg-day was determined for this review, based on significant reductions in serum testosterone levels, decreased relative testes weights, and testes histopathology.

[11] 676594: In a non-guideline study, male Sprague-Dawley rats (16/group) were dosed daily with DBP (99.5% purity) at 0 (vehicle), 250, 500, 1,000, and 2,000 mg/kg-day, via gavage in corn oil, for 30 days. Eight animals per group were sacrificed at the end of the exposure period (exposure group), and the remaining 8/group were sacrificed after a 15-day recovery period. Animals were purportedly monitored for mortality and clinical signs, although the frequency and method of observations were not specified. Body weights were recorded twice weekly. At necropsy, blood was collected for the measurement of serum testosterone and glucocorticoids. Gene expression levels of 11β-hydroxysteroid dehydrogenase 1 (11β-HSD1), and the steroidogenesis acute regulatory protein (StAR) were measured in the testes and Western blots were conducted to quantify the glucocorticoid receptor (GR) protein levels. Testes, epididymides, and adrenals were weighed. Both testes and adrenals were histopathologically examined. No animals died. After 17 days of exposure, four animals in the 2,000 mg/kg-day group showed evidence of a decrease in normal activity, compared to controls (no further details). Clinical observations in other dose groups were not provided. No significant differences in body weights of treated animals, compared to controls, were observed (data not shown). Serum testosterone decreased in a dose-related manner in exposed animals; the decrease was significant at $\geq$ 500 mg/kg-day. After exposure, serum glucocorticoid concentrations were significantly increased at 1,000 and 2,000 mg/kg-day. Levels of both hormones were comparable to controls in animals allowed to recover. Only relative organ weights, in the absence of terminal body weights, were reported. Immediately after exposure, there was a dose-related decrease in relative testes weights that were significant at $\geq$ 500 mg/kg-day. Epididymis weights were significantly reduced at 1,000 and 2,000 mg/kg-day. After the recovery period, both testes and epididymis relative weights were still decreased, relative to controls, at $\geq$ 1,000 mg/kg-day. No effects on adrenal weights were observed. Except for some representative images from control and high-dose samples, histopathology results were qualitatively described. There was purportedly a reduction in the number of Leydig cells with concomitant decreases in the amount of different spermatogenic cells that the authors noted as being dose-dependent. The effects were observed in the 500, 1,000, and 2,000 mg/kg-day groups with no histopathology at 250 mg/kg-day. Degeneration of seminiferous tubules was also described, although the dose group(s) at which this was observed is not entirely clear. It was noted that the effects "did not improve" in the post-exposure group, but that Leydig cell production increased (dose group(s) not specified). No histopathology was observed in the adrenals. Mechanistic results: Gene expression analysis showed significant increases in the expression of 11β-HSD1 and a significant decrease in StAR expression in the two highest dose groups, compared with controls. GR protein levels were also significantly increased in the 1,000 and 2,000 mg/kg-day groups, compared with controls. There were no gene expression or protein concentration changes in the recovery animals.The study authors did not derive toxicity values. A NOAEL of 250 mg/kg-day and a LOAEL of 500 mg/kg-day was determined for this review, based on significant reductions in serum testosterone levels, decreased relative testes weights, and testes histopathology.

[12] 676594: In a non-guideline study, male Sprague-Dawley rats (16/group) were dosed daily with DBP (99.5% purity) at 0 (vehicle), 250, 500, 1,000, and 2,000 mg/kg-day, via gavage in corn oil, for 30 days. Eight animals per group were sacrificed at the end of the exposure period (exposure group), and the remaining 8/group were sacrificed after a 15-day recovery period. Animals were purportedly monitored for mortality and clinical signs, although the frequency and method of observations were not specified. Body weights were recorded twice weekly. At necropsy, blood was collected for the measurement of serum testosterone and glucocorticoids. Gene expression levels of 11β-hydroxysteroid dehydrogenase 1 (11β-HSD1), and the steroidogenesis acute regulatory protein (StAR) were measured in the testes and Western blots were conducted to quantify the glucocorticoid receptor (GR) protein levels. Testes, epididymides, and adrenals were weighed. Both testes and adrenals were histopathologically examined. No animals died. After 17 days of exposure, four animals in the 2,000 mg/kg-day group showed evidence of a decrease in normal activity, compared to controls (no further details). Clinical observations in other dose groups were not provided. No significant differences in body weights of treated animals, compared to controls, were observed (data not shown). Serum testosterone decreased in a dose-related manner in exposed animals; the decrease was significant at $\geq$ 500 mg/kg-day. After exposure, serum glucocorticoid concentrations were significantly increased at 1,000 and 2,000 mg/kg-day. Levels of both hormones were comparable to controls in animals allowed to recover. Only relative organ weights, in the absence of terminal body weights, were reported. Immediately after exposure, there was a dose-related decrease in relative testes weights that were significant at $\geq$ 500 mg/kg-day. Epididymis weights were significantly reduced at 1,000 and 2,000 mg/kg-day. After the recovery period, both testes and epididymis relative weights were still decreased, relative to controls, at $\geq$ 1,000 mg/kg-day. No effects on adrenal weights were observed. Except for some representative images from control and high-dose samples, histopathology results were qualitatively described. There was purportedly a reduction in the number of Leydig cells with concomitant decreases in the amount of different spermatogenic cells that the authors noted as being dose-dependent. The effects were observed in the 500, 1,000, and 2,000 mg/kg-day groups with no histopathology at 250 mg/kg-day. Degeneration of seminiferous tubules was also described, although the dose group(s) at which this was observed is not entirely clear. It was noted that the effects "did not improve" in the post-exposure group, but that Leydig cell production increased (dose group(s) not specified). No histopathology was observed in the adrenals. Mechanistic results: Gene expression analysis showed significant increases in the expression of 11β-HSD1 and a significant decrease in StAR expression in the two highest dose groups, compared with controls. GR protein levels were also significantly increased in the 1,000 and 2,000 mg/kg-day groups, compared with controls. There were no gene expression or protein concentration changes in the recovery animals.The study authors did not derive toxicity values. A NOAEL of 250 mg/kg-day and a LOAEL of 500 mg/kg-day was determined for this review, based on significant reductions in serum testosterone levels, decreased relative testes weights, and testes histopathology.

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Dibutyl 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

Dibutyl 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
Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Rat-Fischer 344 - [rat]-Both	Oral-Diet-Duration: Chronic (>90 days)-7-13-week(s) 7 days/week 13 week(s) 8. DBP 13-week feed study in rats: Rats were exposed 7 days/week for 13 weeks.	**POD: 178 mg/kg-bw/day (LOAEL) - Hypotriglyceridemia in male rats.** n= 20 Dose= 0, n= 20 Dose= 178, n= 20 Dose= 359, n= 20 Dose= 720, n= 20 Dose= 1540, n= 20 Dose= 2964, mg/kg-bw/day	See footnotes for full summary [1]	Data suggests issues with palatability. In a dietary study, food consumption data was reported as means only without measures of variance, and individual animal data were not provided.	Reproductive/Developmental-No. fetuses/breeding group, Litter weight; Gestation length, number of pups/litter, number of live pups/litter, percentage of live pups/litter, number of pups/sex/litter, Offspring clinical observations, mortality, feed consumption, histologic examinations on >30 organs/tissues, gross necropsy, offspring body weights, number of implantation sites, mating index, fertility index-Hepatic/Liver-Absolute liver weights of dams, palmitoyl-CoA oxidase activity of dams (Studies 1, 2, 3, and 4).Serum chemistry (ALP, ALT, total protein, albumin, total cholesterol, triglycerides, sorbitol dehydrogenase, bile acids, and glucose), Histopathology of liver (Studies 8 and 9). Absolute and relative liver weight (Studies 8, 9, 10, and 11).-Nutritional/Metabolic-Terminal body weights (Studies 1, 2, 3, and 4).Body weight, feed consumption (Studies 5, 6, 7, 8, 9, 10, 11, and 12) Body weight	Marsman et-al 1995 680063

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Dibutyl 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
Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Rat-Fischer 344 - [rat]-Both	Oral-Diet-Duration: Chronic (>90 days)-7-13-week(s) 7 days/week 13 week(s) 8. DBP 13-week feed study in rats: Rats were exposed 7 days/week for 13 weeks.	**POD: 178 mg/kg-bw/day (LOAEL) - Hypotriglyceridemia in male rats.** n= 20 Dose= 0, n= 20 Dose= 178, n= 20 Dose= 359, n= 20 Dose= 720, n= 20 Dose= 1540, n= 20 Dose= 2964, mg/kg-bw/day	See footnotes for full summary [2]	Data suggests issues with palatability. In a dietary study, food consumption data was reported as means only without measures of variance, and individual animal data were not provided.	Reproductive/Developmental-No. fetuses/breeding group, Litter weight; Gestation length, number of pups/litter, number of live pups/litter, percentage of live pups/litter, number of pups/sex/litter, Offspring clinical observations, mortality, feed consumption, histologic examinations on >30 organs/tissues, gross necropsy, offspring body weights, number of implantation sites, mating index, fertility index-Hepatic/Liver-Absolute liver weights of dams, palmitoyl-CoA oxidase activity of dams (Studies 1, 2, 3, and 4).Serum chemistry (ALP, ALT, total protein, albumin, total cholesterol, triglycerides, sorbitol dehydrogenase, bile acids, and glucose), Histopathology of liver (Studies 8 and 9). Absolute and relative liver weight (Studies 8, 9, 10, and 11).-Nutritional/Metabolic-Terminal body weights (Studies 1, 2, 3, and 4).Body weight, feed consumption (Studies 5, 6, 7, 8, 9, 10, 11, and 12).Body weight gain (Studies 5, 6, 7, and 12).-Other (please specify below) (Clinical observations)-Clinical Observations-	Marsman et al-1995 680063

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Dibutyl 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
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Dibutyl 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
Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Mouse-B6C3F1 - [mouse]-Both	Oral-Diet-Duration: Chronic (>90 days)-7-13-week(s) 7 days/week 13 week(s) 9. DBP 13-week feed study in mice: Mice were exposed 7 days/week for 13 weeks.	**POD: 812 mg/kg-bw/day (NOAEL) -Decreased body weights and weight gain in male mice.** n= 20 Dose= 0, n= 20 Dose= 163, n= 20 Dose= 353, n= 20 Dose= 812, n= 20 Dose= 1601, n= 20 Dose= 3689, mg/kg-bw/day	See footnotes for full summary [4]	In a dietary study, food consumption data was reported as means only without measures of variance. The test is suggestive of some outliers and individual animal data were not provided. This leads to some uncertainties in the accuracy of the reported doses in mg/kg-day.	Reproductive/Developmental-No. fetuses/breeding group, Litter weight; Gestation length, number of pups/litter, number of live pups/litter, percentage of live pups/litter, number of pups/sex/litter, Offspring clinical observations, mortality, feed consumption, histologic examinations on >30 organs/tissues, gross necropsy, offspring body weights, number of implantation sites, mating index, fertility index-Hepatic/Liver-Absolute liver weights of dams, palmitoyl-CoA oxidase activity of dams (Studies 1, 2, 3, and 4).Serum chemistry (ALP, ALT, total protein, albumin, total cholesterol, triglycerides, sorbitol dehydrogenase, bile acids, and glucose), Histopathology of liver (Studies 8 and 9). Absolute and relative liver weight (Studies 8, 9, 10, and 11).-Nutritional/Metabolic-Terminal body weights (Studies 1, 2, 3, and 4).Body weight, feed consumption (Studies 5, 6, 7, 8, 9, 10, 11, and 12).Body weight gain (Studies 5, 6, 7, and 12).-Immune/Hematological-Hematology, thymus weights, histopathology (thymus, lymph	Marsman et-al 1995 680063

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Dibutyl 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
Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Mouse-B6C3F1 - [mouse]-Both	Oral-Diet-Duration: Chronic (>90 days)-7-13-week(s) 7 days/week 13 week(s) 9. DBP 13-week feed study in mice: Mice were exposed 7 days/week for 13 weeks.	**POD: 812 mg/kg-bw/day (NOAEL) -Decreased body weights and weight gain in male mice.** n= 20 Dose= 0, n= 20 Dose= 163, n= 20 Dose= 353, n= 20 Dose= 812, n= 20 Dose= 1601, n= 20 Dose= 3689, mg/kg-bw/day	See footnotes for full summary [5]	In a dietary study, food consumption data was reported as means only without measures of variance. The test is suggestive of some outliers and individual animal data were not provided. This leads to some uncertainties in the accuracy of the reported doses in mg/kg-day.	Reproductive/Developmental- No. fetuses/breeding group, Litter weight; Gestation length, number of pups/litter, number of live pups/litter, percentage of live pups/litter, number of pups/sex/litter, Offspring clinical observations, mortality, feed consumption, histologic examinations on >30 organs/tissues, gross necropsy, offspring body weights, number of implantation sites, mating index, fertility index-Hepatic/Liver-Absolute liver weights of dams, palmitoyl-CoA oxidase activity of dams (Studies 1, 2, 3, and 4).Serum chemistry (ALP, ALT, total protein, albumin, total cholesterol, triglycerides, sorbitol dehydrogenase, bile acids, and glucose), Histopathology of liver (Studies 8 and 9). Absolute and relative liver weight (Studies 8, 9, 10, and 11).-Nutritional/Metabolic-Terminal body weights (Studies 1, 2, 3, and 4).Body weight, feed consumption (Studies 5, 6, 7, 8, 9, 10, 11, and 12).Body weight gain (Studies 5, 6, 7, and 12).-Immune/Hematological-Hematology, thymus weights, histopathology (thymus, lymph	Marsman et al-1995 680063

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Dibutyl 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
Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Mouse-B6C3F1 - [mouse]-Both	Oral-Diet-Duration: Chronic (>90 days)-7-13-week(s) 7 days/week 13 week(s) 9. DBP 13-week feed study in mice: Mice were exposed 7 days/week for 13 weeks.	**POD: 812 mg/kg-bw/day (NOAEL) -Decreased body weights and weight gain in male mice.** n= 20 Dose= 0, n= 20 Dose= 163, n= 20 Dose= 353, n= 20 Dose= 812, n= 20 Dose= 1601, n= 20 Dose= 3689, mg/kg-bw/day	See footnotes for full summary [6]	In a dietary study, food consumption data was reported as means only without measures of variance. The test is suggestive of some outliers and individual animal data were not provided. This leads to some uncertainties in the accuracy of the reported doses in mg/kg-day.	Reproductive/Developmental-No. fetuses/breeding group, Litter weight; Gestation length, number of pups/litter, number of live pups/litter, percentage of live pups/litter, number of pups/sex/litter, Offspring clinical observations, mortality, feed consumption, histologic examinations on >30 organs/tissues, gross necropsy, offspring body weights, number of implantation sites, mating index, fertility index-Hepatic/Liver-Absolute liver weights of dams, palmitoyl-CoA oxidase activity of dams (Studies 1, 2, 3, and 4).Serum chemistry (ALP, ALT, total protein, albumin, total cholesterol, triglycerides, sorbitol dehydrogenase, bile acids, and glucose), Histopathology of liver (Studies 8 and 9). Absolute and relative liver weight (Studies 8, 9, 10, and 11).-Nutritional/Metabolic-Terminal body weights (Studies 1, 2, 3, and 4).Body weight, feed consumption (Studies 5, 6, 7, 8, 9, 10, 11, and 12).Body weight gain (Studies 5, 6, 7, and 12).-Immune/Hematological-Hematology, thymus weights, histopathology (thymus, lymph	Marsman et al-1995 680063

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Dibutyl 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

* Overall Quality Determination

[1] 680063: 8.DBP 13-week feed study in rats. In a 13-week repeated-dose toxicity study, F344/N rats (10/sex) were administered DBP (purity >98%) at 0, 2,500, 5,000, 10,000, 20,000, or 40,000 ppm in feed, 7 days/week for 13 weeks. The respective author-reported doses were 0, 178, 359, 720, 1,540, and 2,964 mg/kg-day for males and 0, 177, 356, 712, 1,413, and 2,943 mg/kg-day for females. Animals were observed twice/day for mortality and clinical signs. Clinical observations and body weights were recorded weekly and food consumption was measured twice weekly. Blood was collected at the end of the study for hematological and clinical chemistry analysis. Zinc and testosterone levels were measured in serum and testes of all male rats. Sperm motility and vaginal cytology evaluations were conducted in the 2,500, 10,000 and 20,000 ppm groups. Necropsies were performed on all animals. The heart, right kidney, liver, lungs, right testis, and thymus were weighed. Livers (5/sex/group) were analyzed for hepatic peroxisomal proliferation and liver enlargement. Comprehensive histopathological examinations were conducted on all animals in the control and high dose groups along with all gross lesions. The liver and testes were examined in animals from all dose groups. No animals died during the study and there were no clinical signs related to exposure (data not provided). Final mean body weights were significantly decreased in males (8-55%) at ≥10,000 ppm and in females (8-27%) at ≥20,000 ppm DBP in feed. Animals in the high-dose group were reported to be emaciated. Significant reductions in mean body weight gains were observed in both sexes in the same dose groups. Relative to controls, feed consumption in males and females in the 40,000 ppm group was reduced by 39% and 17%, respectively. It is unclear if this was a palatability issue. Males exhibited signs of anemia at ≥5,000 ppm characterized by decreases in RBC count, hemoglobin, and hematocrit (only at ≥20,000 ppm), compared with controls. MCV values were also slightly increased at ≥10,000 ppm. There were no changes in male reticulocyte counts, but nucleated erythrocyte counts were significantly higher at 40,000 ppm. Platelet counts in males were also significantly increased at ≥5,000 ppm. Hematological changes in females were limited to slight, but significant increases in nucleated erythrocyte, leukocyte, and lymphocyte counts at 40,000 ppm. The authors suggested that significantly high albumin concentrations in exposed males only (all dose groups) was suggestive of dehydration; however, water consumption was not monitored. Most clinical chemistry changes were consistent with liver toxicity and included: decreases in total protein in males at 40,000 ppm and in females at ≥20,000 ppm; dose-related decreases in total cholesterol in both sexes significant at ≥20,00 ppm and significant decreases in triglycerides in males at ≥2,500 ppm and in females at ≥10,000 ppm; increased ALP and sorbitol dehydrogenase at ≥20,000 ppm in males and increased ALP in females at ≥10,000 ppm; and dose-related increases in bile acids in males at ≥20,000 ppm and in females at ≥5,000 ppm. ALT was also increased in females only at the highest dose. Liver palmitoyl-CoA oxidase activity was significantly elevated in a dose-related manner in both sexes at ≥5,000 ppm. Examination for ultrastructural changes showed evidence of peroxisome proliferation in males and females in the 40,000 ppm groups. Zinc concentrations were lower in serum and testes of male rats at 40,000 ppm and ≥20,000 ppm, respectively. Testosterone levels in testes were comparable across groups but serum testosterone levels were significantly reduced at ≥20,000 ppm. Significant organ weight changes observed in male rats included increased absolute (17-28%) and relative (18-70%) liver weights at ≥5,000 ppm; at 40,000 ppm, absolute liver weights were decreased (26%), rather than increased, compared with controls. Absolute and relative testes weights were both decreased at ≥20,000 ppm (65-79% and 51-58%, respectively). In female rats, dose-related increases in absolute (9-30%) and relative (11-78%) liver weights were significant at ≥10,000 ppm. Kidney weight changes in both sexes were not directionally consistent and may be considered secondary to body weight changes. Specifically, decreased absolute (41%) and increased relative (8-36%) male kidney weights were observed at 40,000 and ≥5,000 ppm, respectively, and decreased absolute (9%) and increased relative (9-24%) female kidney weights were observed at 40,000 and ≥10,000 ppm, respectively. No liver or testes lesions were observed in controls. Incidences of liver lesions, consisting primarily of cytoplasmic alterations, were significantly increased in both sexes in the ≥10,000 ppm groups. Cytoplasmic granular staining in hepatocytes (Shmorl's-positive staining), consistent with lipofuscin, increased with intensity in both sexes at ≥20,000 ppm. Testes atrophy of the germinal epithelium was also observed, with increased incidences at ≥10,000 ppm. Focal atrophy of seminiferous tubules occurred at ≥10,000 ppm and marked hypospermia of the epididymis occurred at ≥20,000 ppm. In the 40,000 ppm group, an almost complete loss of germinal epithelial cells in the seminiferous tubules, with no evidence of spermatogenesis was reported. Additional examination of male reproductive organs in the lower dose groups showed statistically significant decreases in left epididymis, cauda epididymis, and left testis weights at 20,000 ppm. In the same dose group, there were marked decreases in the number of spermatid heads per testis and per gram testis and in overall sperm counts. There were no mobile sperm at 20,000 ppm. No effects on female estrous cyclicity were observed. Overall, the authors identified DBP as a hepatic and testicular toxicant; a toxicity value was not reported; however, it was noted by the authors that the most sensitive endpoint was the significant reduction in triglycerides in male rats from the 2,500 ppm group. In this dose group, triglyceride concentrations were 27% lower than reported for controls, and triglyceride levels were inversely related to concentrations of DBP. The authors further noted that the triglyceride levels in control rats in this study were significantly higher than the levels of slightly older control rats used for an adjoining study (no age-matched comparisons were made) and claimed that this may have "artificially impacted the apparent reduction of triglyceride concentrations" in the current study, but also recognized the liver as the major site of cholesterol biosynthesis and that reductions in circulating cholesterol levels could reflect the hepatotoxic effects of DBP. Reductions in total cholesterol in males and females, reductions in triglycerides in females, and changes in liver weights, and lesions in the livers of rats occurred at higher doses. A LOAEL of 2,500 ppm DBP in feed or 178 mg/kg-day (the lowest dose), was identified for this review based on hypotriglyceridemia in male rats, while noting some uncertainties described above. A NOAEL was not identified.

[2] 680063: 8.DBP 13-week feed study in rats. In a 13-week repeated-dose toxicity study, F344/N rats (10/sex) were administered DBP (purity >98%) at 0, 2,500, 5,000, 10,000, 20,000, or 40,000 ppm in feed, 7 days/week for 13 weeks. The respective author-reported doses were 0, 178, 359, 720, 1,540, and 2,964 mg/kg-day for males and 0, 177, 356, 712, 1,413, and 2,943 mg/kg-day for females. Animals were observed twice/day for mortality and clinical signs. Clinical observations and body weights were recorded weekly and food consumption was measured twice weekly. Blood was collected at the end of the study for hematological and clinical chemistry analysis. Zinc and testosterone levels were measured in serum and testes of all male rats. Sperm motility and vaginal cytology evaluations were conducted in the 2,500, 10,000 and 20,000 ppm groups. Necropsies were performed on all animals. The heart, right kidney, liver, lungs, right testis, and thymus were weighed. Livers (5/sex/group) were analyzed for hepatic peroxisomal proliferation and liver enlargement. Comprehensive histopathological examinations were conducted on all animals in the control and high dose groups along with all gross lesions. The liver and testes were examined in animals from all dose groups. No animals died during the study and there were no clinical signs related to exposure (data not provided). Final mean body weights were significantly decreased in males (8-55%) at ≥10,000 ppm and in females (8-27%) at ≥20,000 ppm DBP in feed. Animals in the high-dose group were reported to be emaciated. Significant reductions in mean body weight gains were observed in both sexes in the same dose groups. Relative to controls, feed consumption in males and females in the 40,000 ppm group was reduced by 39% and 17%, respectively. It is unclear if this was a palatability issue. Males exhibited signs of anemia at ≥5,000 ppm characterized by decreases in RBC count, hemoglobin, and hematocrit (only at ≥20,000 ppm), compared with controls. MCV values were also slightly increased at ≥10,000 ppm. There were no changes in male reticulocyte counts, but nucleated erythrocyte counts were significantly higher at 40,000 ppm. Platelet counts in males were also significantly increased at ≥5,000 ppm. Hematological changes in females were limited to slight, but significant increases in nucleated erythrocyte, leukocyte, and lymphocyte counts at 40,000 ppm. The authors suggested that significantly high albumin concentrations in exposed males only (all dose groups) was suggestive of dehydration; however, water consumption was not monitored. Most clinical chemistry changes were consistent with liver toxicity and included: decreases in total protein in males at 40,000 ppm and in females at ≥20,000 ppm; dose-related decreases in total cholesterol in both sexes significant at ≥20,00 ppm and significant decreases in triglycerides in males at ≥2,500 ppm and in females at ≥10,000 ppm; increased ALP and sorbitol dehydrogenase at ≥20,000 ppm in males and increased ALP in females at ≥10,000 ppm; and dose-related increases in bile acids in males at ≥20,000 ppm and in females at ≥5,000 ppm. ALT was also increased in females only at the highest dose. Liver palmitoyl-CoA oxidase activity was significantly elevated in a dose-related manner in both sexes at ≥5,000 ppm. Examination for ultrastructural changes showed evidence of peroxisome proliferation in males and females in the 40,000 ppm groups. Zinc concentrations were lower in serum and testes of male rats at 40,000 ppm and ≥20,000 ppm, respectively. Testosterone levels in testes were comparable across groups but serum testosterone levels were significantly reduced at ≥20,000 ppm. Significant organ weight changes observed in male rats included increased absolute (17-28%) and relative (18-70%) liver weights at ≥5,000 ppm; at 40,000 ppm, absolute liver weights were decreased (26%), rather than increased, compared with controls. Absolute and relative testes weights were both decreased at ≥20,000 ppm (65-79% and 51-58%, respectively). In female rats, dose-related increases in absolute (9-30%) and relative (11-78%) liver weights were significant at ≥10,000 ppm. Kidney weight changes in both sexes were not directionally consistent and may be considered secondary to body weight changes. Specifically, decreased absolute (41%) and increased relative (8-36%) male kidney weights were observed at 40,000 and ≥5,000 ppm, respectively, and decreased absolute (9%) and increased relative (9-24%) female kidney weights were observed at 40,000 and ≥10,000 ppm, respectively. No liver or testes lesions were observed in controls. Incidences of liver lesions, consisting primarily of cytoplasmic alterations, were significantly increased in both sexes in the ≥10,000 ppm groups. Cytoplasmic granular staining in hepatocytes (Shmorl's-positive staining), consistent with lipofuscin, increased with intensity in both sexes at ≥20,000 ppm. Testes atrophy of the germinal epithelium was also observed, with increased incidences at ≥10,000 ppm. Focal atrophy of seminiferous tubules occurred at ≥10,000 ppm and marked hypospermia of the epididymis occurred at ≥20,000 ppm. In the 40,000 ppm group, an almost complete loss of germinal epithelial cells in the seminiferous tubules, with no evidence of spermatogenesis was reported. Additional examination of male reproductive organs in the lower dose groups showed statistically significant decreases in left epididymis, cauda epididymis, and left testis weights at 20,000 ppm. In the same dose group, there were marked decreases in the number of spermatid heads per testis and per gram testis and in overall sperm counts. There were no mobile sperm at 20,000 ppm. No effects on female estrous cyclicity were observed. Overall, the authors identified DBP as a hepatic and testicular toxicant; a toxicity value was not reported; however, it was noted by the authors that the most sensitive endpoint was the significant reduction in triglycerides in male rats from the 2,500 ppm group. 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[4] 680063: 9.DBP 13-week feed study in mice. In a 13-week repeated-dose toxicity study, B6C3F1 mice (10/sex) were administered DBP (purity >98%) at 0, 1,250, 2,500, 5,000, 10,000, or 20,000 ppm in feed, 7 days/week for 13 weeks. The respective author-reported doses were 0, 163, 353, 812, 1,601 and 3,689 mg/kg-day for males and 0, 238, 486, 971, 2,137, and 4,278 mg/kg-day for females. Animals were observed twice/day for mortality and clinical signs. Clinical observations and body weights were recorded weekly and food consumption was measured twice weekly. Blood was collected at the end of the study for hematological and clinical chemistry analysis. Zinc and testosterone levels were measured in serum and testosterone was measured in the testes of all male mice. Sperm motility and vaginal cytology evaluations were conducted in the 1,250, 5,000 and 20,000 ppm groups. Necropsies were performed on all animals. The heart, right kidney, liver, lungs, right testis, and thymus were weighed. Livers (5/sex/group) were analyzed for hepatic peroxisomal proliferation and liver enlargement. Comprehensive histopathological examinations were conducted on all animals in the control and high dose groups along with all gross lesions. The liver and testes were examined in animals from all dose groups. No animals died during the study and there were no clinical signs related to exposure. Final mean body weights were statistically significantly decreased in males (10-15%) and females (6-15%) in the ≥5,000 ppm groups. Mean body weight gains were also decreased in the same dose groups. Higher food consumption was observed in the higher dose group males and was purportedly due to an unusually high consumption of a few animals and was associated with feed spillage. Compared with controls, male feed intake was increased 3, 12, 24, 24, and 38% in the 1,250, 2,500, 5,000, 10,000, and 20,000 ppm groups, respectively. Feed intake in females was more consistent across groups with increases over controls ranging from 5-14%. Hematological effects were limited to a slight decrease in MCV levels in male mice and a reduction in hematocrit in females at 20,000 ppm. Testicular, but not serum zinc concentrations were significantly increased at ≥5,000 ppm, but with no clear relation to dose. Serum testosterone measurements proved to be highly variable. Although the levels were generally elevated in exposed male mice in comparison with controls, the increase was only significant in the 1,250 ppm group.Notable organ weight changes in males included statistically significant increases in absolute (19%) and relative (7-38%) liver weights in the 20,000 ppm and ≥5,000 ppm groups, respectively. There was a significant 15% reduction in male absolute right kidney weights at the highest dose, but no change in relative kidney weights. Absolute (13-34%) and relative (8-53%) liver weights were also increased in females, respectively, at ≥10,000 ppm and ≥5,000 ppm in feed. Absolute and relative kidney weights were significantly increased in exposed females, compared with controls; however, the increases were not dose-related, and the highest dose group showed no change in absolute kidney weights. Changes in other organ weights were considered to be sporadic or a reflection of body weight changes. Extended examinations of male reproductive organs showed a significant reduction of left epididymis weights and an increase in the number of spermatid heads per gram of testis in the 20,000 ppm group. There were no associated gross or microscopic testicular alterations. No changes to estrous cyclicity was observed in females. No gross lesions attributed to treatment were observed. Microscopic lesions consistent with hepatotoxicity included increased incidences of hepatocyte cytoplasmic alterations that were significant in males at ≥10,000 ppm and in females at 20,000 ppm. Staining for lipofuscin showed increased incidence and intensity increasing with dose. No author-reported toxicity value was provided. Based on the data available, a NOAEL of 2,500 ppm and a LOAEL of 5,000 ppm was identified based on decreased body weights and weight gain in male mice. These correspond to doses of 812 and 1,601 mg/kg-day. Decreased body weights in females and increased relative liver weights in both sexes also occurred at 5,000 ppm; however, the magnitudes of change were small (<10% of controls).

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Dibutyl 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

Dibutyl 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 use of study guidelines and GLP compliance are not reported. Rat-Sprague-Dawley - [rat]-Female	Oral-Diet-Duration: Reproductive/Developmental-1-F0 - gestation (GD 12-23)-F0- lactation (PND 0-14) GD 12 to PND 14	**POD: 949 mg/kg-bw/day (LOAEL) -Developmental (decreased AGD and scaled AGD in pups; increased number of nipples/areolae in pups; induction of multinucleated germ cells and large Leydig cell aggregates in pup testes; increased absolute and relative weights of seminal vesicles and levator ani plus bulbocavernosus muscles in pups)** n= 24 Dose= 0, n= 20 Dose= 949, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 12-23, F0- lactation, PND 0-14	See footnotes for full summary [1]	Only one dose level of DBP was tested in this study.	Nutritional/Metabolic-Body weight, body weight gain, food consumption-Reproductive/Developmental-Number of litters; number of live pups; number of live pups/litter; male pup body weight; anogenital distance (absolute and scaled = AGD/BW^1/3); average number of nipples/areolae per male pup (based on visual identification; no histology confirmation); testis testosterone level in pups; gubernacular cord length in pups; gross necropsy of pups; examination of genital tract of pups for alterations (e.g., hypospadias, cleft phallus); examination of urogenital tract of pups; examinations for undescended testes and epididymal agenesis in pups; in situ examination of testes, epididymides, gubernacular cords, vas deferens, seminal vesicles, levator ani plus bulbocavernosus (LABC) muscles, and prostate in pups; examination of non-reproductive tissues in situ in pups; organ weights (absolute and relative	Clewell et. al 2013 1325348

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Dibutyl 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 guidelines or state if GLP condition were adhered to. Rat-Sprague-Dawley - [rat]-Both	Oral-Gavage-Duration: Reproductive/Developmental-F0 - gestation (GD14-GD18) Exposed from GD14- GD18	**POD: 100 mg/kg-bw/day (LOAEL) -Developmental: decreased fetal testosterone production from testes (ex vivo), decreased fetal viability** n= 3 Dose= 0, n= 3 Dose= 33, n= 2 Dose= 50, n= 3 Dose= 100, n= 3 Dose= 300, mg/kg-bw/day Female Exposure: F0 - gestation, GD14- GD18	Pregnant Harlan SD rats and/or Charles Rivers SD rats were mated by the supplier and shipped GD1. For the following data, the rat species utilized was the Harlan SD rats. Animals were gavaged with various doses of DBP between GD 14-18. Dams were sacrificed on GD 18 approximately two hours after dosing, and fetal testes were obtained for determination of fetal testicular testosterone production. DBP experiments were conducted over several blocks (Blocks 1, 18, 22, 26, and 34) and results were reported for each individual block. Each block consisted of about 15 pregnant rats that were then randomly divided into groups based on weight to ensure equal distribution. Block 1 (n=5 control; n=3 DBP group) there was a reduction in fetal testicular testosterone production at the 750 mg/kg/day group (LOAEL). There was no change in fetal viability or maternal weight. Block 18 (n=2-3) there was a reduction in fetal testicular testosterone production at the 100 mg/kg/day group (LOAEL) while the NOAEL was measured at 50 mg/kg/day. Although there was a pup lost in one of the dose groups, there was not a significant decrease in fetal viability or maternal weight. Block 22 (n=3-4) there was a reduction in fetal testicular testosterone production at the 100 mg/kg/day group (LOAEL) while the NOAEL was measured at 10 mg/kg/day. Block 26 (n=3-4) there was no reduction in fetal testicular testosterone production at the NOAEL of 100 mg/kg/day. Block 34 (n=6) there was a reduction in fetal testicular testosterone production at the 750 mg/kg/day group (LOAEL). Supplemental material considered in evaluation (HERO number 3045543).	The overall number of animals per experiment for the fetal measurements was often quite low, which would impact overall statistical power. Also, since the animals were stated to be shipped on GD1, there is likely stress related effects that is consistent across groups. Although maternal weight was recorded, fetal weight was not accounted for.	Reproductive/Developmental - Developmental - fetal survival-Reproductive/Developmental-Female reproductive - maternal weight gain-Reproductive/Developmental-Male Reproductive - testosterone; High	Furr et. al 2014-2510906

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Dibutyl 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 use of GLP conditions was specified Rat-Other (Crl:(CD)SD)-Female	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD14-GD18) Daily gavage from GD14-GD18	**POD: 300 mg/kg-bw/day (LOAEL) -Decreased ex vivo fetal testicular testosterone production** n= 4 Dose= 0, n= 3 Dose= 300, n= 4 Dose= 600, n= 4 Dose= 900, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD14-GD18	The current reference is a continuation from the same dataset discussed in Furr et al. 2014 (HERO: 2510906). Pregnant female rats were divided into blocks where either Harlan SD rats and/or Charles Rivers SD rats were utilized. For the following study, the Charles Rivers SD rats (Crl:(CD)SD) species were utilized. DBP experiments were conducted over several blocks (Blocks 51, 53, 70 and 71) and results were reported for each individual block. The results for DBP specifically were discussed with the corresponding author (HERO: 12162058), and raw data values were provided to allow for extraction of LOAEL for the aforementioned rat species. Each block consisted of about 15 pregnant rats that were then randomly divided into groups based on weight to ensure equal distribution. Blocks 70 - 71 were used specifically, and both show decreased fetal testosterone production at 300 mg/kg-day (LOAEL).	The overall number of animals per experiment for the fetal measurements was often quite low, which would impact overall statistical power. Also, since the animals were stated to be shipped on GD1, there is likely stress related effects that is consistent across groups. Although maternal weight was recorded, fetal weight was not accounted for.	Reproductive/Development; Fetal testosterone production ex vivo; High	Gray et. al 2021 9419406
No guideline or use of GLP conditions was specified. Rat-Sprague-Dawley - [rat]-Both	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD 8-18) Pregnant dams were dosed from GD8-18	**POD: 100 mg/kg-bw/day (NOAEL) -Reduced fetal testicular testosterone** n= 3 Dose= 0, n= 4 Dose= 33, n= 4 Dose= 50, n= 4 Dose= 100, n= 4 Dose= 300, n= 4 Dose= 600, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 8-18	Pregnant female Sprague-Dawley rats were gavaged with 0 (corn oil), 33, 50, 100, 300, and 600 mg/kg-day DBP from GD 8 to GD 18 (N= 3-4 dams/dose). Dams were sacrificed on GD 18. One dam in the control group was not pregnant. Treatment with DBP did not significantly affect mean dam body weight at GD 18. The number of implantations was not affected by DBP, nor was the number of live fetuses One dead fetus was observed in a control litter in the DBP study. A NOAEL of 100 mg/kg-day and a LOAEL of 300 mg/kg-day was determined based on significant reductions in fetal testicular testosterone production.	Maternal body weight was not corrected for gravid uterine weight and fetal body weights were not reported, so maternal effects cannot be clearly distinguished from fetal effects. Data shared via personal correspondence with the laboratory indicated that there were discrepancies between the reported sample sizes and actual sample sizes for fetal survival, but this was not considered a major concern for sensitivity. The sample size was generally small, particularly in the control group due to lack of pregnancy.	Reproductive/Development; Male reproductive - testosterone; High	Howdeshell et. al 2008 675206

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Dibutyl Phthalate- Parent compound - Reproductive/Developmental

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No guideline or use of GLP conditions was specified. Rat-Sprague-Dawley - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-F0 - gestation (GD19) Dams were administered a single gavage on GD19	**POD: 100 mg/kg-bw/day (NOAEL) -Reduced fetal testicular testosterone 1 hr after dosing** n= 5 Dose= 0, n= 5 Dose= 1, n= 5 Dose= 10, n= 5 Dose= 100, n= 3 Dose= 500, mg/kg-bw/day Female Exposure: F0 - gestation, GD19	Pregnant Sprague-Dawley rats gavaged with a single dose of 0, 1, 10, 100, or 500 mg/kgday DBP on GD19 and assessed 1, 3, or 6 hr after dosing. Sperm positive = GD0. Vehicle control was corn oil. Testosterone values were obtained by comparison to a standard curve. Cross-reactivity of the kit to other steroids is less than 5%. Testosterone was measured in duplicate 25-ll aliquots using a Double Antibody-125I RIA Kit (catalog no. 07–189105; MP Biomedicals, Costa Mesa, CA). The lower detection limit of our assay was 0.025 ng testosterone per milliliter sera. Two testes per dam from different fetuses were combined for analysis. 1 hour after dosing, testicular testosterone levels were significantly reduced in the 500 mg/kg-day group compared to controls (62%). 3 hours after dosing, there was no decrease in testicular testosterone levels, compared to controls, but a statistically significant increase at the low dose level was observed (60%). 6 hours after dosing, no statistically significant changes in testicular testosterone level were observed, although there was a non-statistically significant reduction of 50% in the 500 mg/kg-day group. A NOAEL of 100 mg/kg-day was identified based on significant reductions in fetal testicular testosterone.	Low sample size for a reproductive & developmental study, and the high dose group reported sample size as a range of 3-4 animals for the 1, 3, or 6 hour timepoints rather than an exact number.	Reproductive/Developmental; Fetal testosterone; Medium	Johnson et. al-2007 675949
No guideline or use of GLP conditions was specified. Rat-Sprague-Dawley - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD12-20) Dams were dosed daily from GD 12 to GD20	**POD: 500 mg/kg-bw/day (LOAEL) -reduced fetal testicular testosterone** n= 5 Dose= 0, n= 6 Dose= 500, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD12-20	Pregnant Sprague-Dawley rats (n = 5-6/group) were gavaged with 0 or 500 mg/kg DBP from GD-12 – GD20 and evaluated at GD 20. Sperm positive = GD 0. Testosterone measured in homogenized testes. On the day of tissue procurement, animals were euthanized 6 h after the final DBP dosing. When possible, two testes (each from different fetuses) per litter were pooled for testosterone analysis., and testes testosterone measured using a commercially available kit. Decreased fetal testicular testosterone was observed at 500 mg/kg-day (85%), which coincided with a significant decrease in AGD (mm; 18%). Histological examination of fetal rat testes was also conducted. An increase in the percentage of seminiferous cords with MNGs was reported , as well as the diameter of seminiferous cords. A LOAEL of 500 mg/kg-day was determined based on significant reductions in male AGD (mm) , increased percentage of seminiferous cords with one or more MNGs, and reduced fetal testicular testosterone.	No major limitations, although there is uncertainty regarding whether litter means were used for testes testosterone measurements, as it was for AGD.	Reproductive/Developmental; Fetal testosterone levels; Medium	Johnson et. al-2011 788312

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Dibutyl 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 use of GLP conditions was specified. Rat-Sprague-Dawley - [rat]-Both	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD 18) Pregnant rats were dosed once on GD 18	**POD: 100 mg/kg-bw/day (NOAEL) -reduced fetal testicular testosterone** n= 10 Dose= 0, n= 10 Dose= 100, n= 10 Dose= 500, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 18	Pregnant female Sprague-Dawley rats were gavaged with 0 (corn oil), 100, or 500 mg/kg-day DBP on GD 18 and sacrificed 24 hours later on GD 19 (N= 10 dams/dose). Fetal testes were removed and homogenates were evaluated for testosterone via radioimunoassay (RIA).	No major limitations identified	Reproductive/Development; Male Reproductive - testosterone; Low	Kuhl et. al 2007 1321665
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: 0.3 % (in water or food) (NOAEL) -Based on decreased number of fertile pairs, litters/pair, the number of live pups/litter, and the proportion of pups born alive** n= 80 Dose= 0, n= 40 Dose= 0.03, n= 40 Dose= 0.3, n= 40 Dose= 1.0, % (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 [2]	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. Additionally, the choice of using mice did not demonstrate male reproductive specific effects as observed in rat studies.	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; Low	Lamb et. al 1987 61566

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Dibutyl 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: 0.3 % (in water or food) (NOAEL) -Based on decreased number of fertile pairs, litters/pair, the number of live pups/litter, and the proportion of pups born alive** n= 80 Dose= 0, n= 40 Dose= 0.03, n= 40 Dose= 0.3, n= 40 Dose= 1.0, % (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 [3]	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. Additionally, the choice of using mice did not demonstrate male reproductive specific effects as observed in rat studies.	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

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Dibutyl 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: 0.3 % (in water or food) (NOAEL) -Based on decreased number of fertile pairs, litters/pair, the number of live pups/litter, and the proportion of pups born alive** n= 80 Dose= 0, n= 40 Dose= 0.03, n= 40 Dose= 0.3, n= 40 Dose= 1.0, % (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 [4]	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. Additionally, the choice of using mice did not demonstrate male reproductive specific effects as observed in rat studies.	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; Low	Lamb et. al 1987 61566

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Dibutyl 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 which, if any compliance guidelines were adhered to. The study did report "The animal protocols were reviewed and approved by the Animal Care and Use Committee of the National Institute of Health Sciences, Japan" Rat-Other (CD (SD) IGS)-Female	Oral-Diet-Duration: Reproductive/Developmental-F0 - gestation (GD15 to delivery)-F0- lactation (until weaning (PND21)) Pregnant dams were exposed from GD 15 until PND 21.	**POD: 2.5 mg/kg-bw/day (LOAEL) -Developmental toxicity (reduced spermatocyte development, mammary gland toxicity)** n= 7 Dose= 0, n= 7 Dose= 2.5, n= 6 Dose= 23.4, n= 8 Dose= 236.4, n= 6 Dose= 1137.5, mg/kg-bw/day Female Exposure: F0 - gestation, GD15 to delivery, F0- lactation, until weaning (PND21)	See footnotes for full summary [5]	Analytical concentration of test substance in the food was not measured. Also, stability of test substance in food is not reported nor is storage and preparation methods.	Nutritional/Metabolic-Body weight and food intake of pregnant dams-Reproductive/Developmental-Number of pups, body weights, sex ratio, anogenital distance, number of nipples/areolae, day of vaginal opening, day of preputial separation, estrous cyclicity. Organs weighed: brain, liver, kidneys, adrenals, testes, epidiymides, ovaries and uterus; in addition, pituitary, ventral lobe of the prostate and seminal vesicles were weight at PNW 11 and PNW 20. Histopathology was performed on the following tissues: brain, pituitary, thyroid glands, liver, kidneys, adrenals, testes, epidiymides, prostate, seminal vesicles, ovaries, uterus, vagina, and mammary glands. Immunohistochemistry was performed on the pituitary gland on offspring sacrificed on PND 21 and PNW 11 for luteinizing hormone (LH), follicle-stimulating hormone (FSH), and prolactin.; Medium	Lee et. al 2004 676278

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Dibutyl 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 compliance guidelines were adhered to. Rat-Sprague-Dawley - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD 12-19) Pregnant dams were exposed from GD 12-19 and sacrificed on GD 19	**POD: 10 mg/kg-bw/day (NOAEL) -Called by study authors for reduction of genes and proteins associated with testosterone production together with the reduction in intratesticular testosterone.** n= 14 Dose= 0, n= 10 Dose= 0.1, n= 10 Dose= 1, n= 10 Dose= 10, n= 5 Dose= 30, n= 10 Dose= 50, n= 10 Dose= 100, n= 10 Dose= 500, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 12-19	See footnotes for full summary [6]	This study had some data reporting limitations (i.e., initial body weights not reported, measures to reduce observational bias not reported, unclear sample sizes for each endpoint (i.e., presented as a range), and only presentation of offspring data as means of individual animals, rather than as litter means). These limitations may impact interpretation of the results.	Reproductive/Developmental Testicular levels of testosterone (radioimmunoassay) and lipid content (oil red O staining)Gene and protein expression of genes and proteins involved in cholesterol transport and steroidogenesis (RT-PCR, Western Blot, and immunohistochemistry); Medium	Lehmann et-al 2004 674382

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Dibutyl 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 compliance guidelines were adhered to. Rat-Sprague-Dawley - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD 12-19) Pregnant dams were exposed from GD 12-19 and sacrificed on GD 19	**POD: 10 mg/kg-bw/day (NOAEL) -Called by study authors for reduction of genes and proteins associated with testosterone production together with the reduction in intratesticular testosterone.** n= 14 Dose= 0, n= 10 Dose= 0.1, n= 10 Dose= 1, n= 10 Dose= 10, n= 5 Dose= 30, n= 10 Dose= 50, n= 10 Dose= 100, n= 10 Dose= 500, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 12-19	See footnotes for full summary [7]	This study had some data reporting limitations (i.e., initial body weights not reported, measures to reduce observational bias not reported, unclear sample sizes for each endpoint (i.e., presented as a range), and only presentation of offspring data as means of individual animals, rather than as litter means). These limitations may impact interpretation of the results.	Reproductive/Developmental Testicular levels of testosterone (radioimmunoassay) and lipid content (oil red O staining)Gene and protein expression of genes and proteins involved in cholesterol transport and steroidogenesis (RT-PCR, Western Blot, and immunohistochemistry); Uninformative	Lehmann et-al 2004 674382

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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
Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Rat-Fischer 344 - [rat]-Female	Oral-Diet-Duration: Reproductive/Developmental-1-F0 - gestation (20 days) 3. DBP Supp study in utero in rats: Pregnant rats were exposed 7 days/week to undosed or dosed feed for up to 20 days during the gestation period.	**POD: 20000 ppm (in air, water, or food) (NOAEL) -Significant decreases in dam body weights, in the number of fetuses per breeding group, and in fetal liver weights** n= 30 Dose= 0, n= 10 Dose= 1250, n= 10 Dose= 2500, n= 10 Dose= 5000, n= 10 Dose= 7500, n= 10 Dose= 10000, n= 10 Dose= 20000, ppm (in air, water, or food)Total # of generations: 1 Female Exposure: F0 - gestation, 20 days	See footnotes for full summary [8]	Major limitations include the failure to measure or report dam body weights and feed consumption in a dietary study. Because these data are missing, default body weight and feed consumption values will have to be used to determine dosing in mg/kg-day, and the accuracy is a concern. Results for some endpoints described in the methods were not reported. The study was missing starting body weight data for pregnant females, information on allocation procedures, and results for clinical observations. The number of animals per group is unclear due to discrepancies between the text and data tables.	Reproductive/Developmental-No. fetuses/breeding group, Litter weight; Gestation length, number of pups/litter, number of live pups/litter, percentage of live pups/litter, number of pups/sex/litter, Offspring clinical observations, mortality, feed consumption, histologic examinations on >30 organs/tissues, gross necropsy, offspring body weights, number of implantation sites, mating index, fertility index-Hepatic/Liver-Absolute liver weights of dams, palmitoyl-CoA oxidase activity of dams (Studies 1, 2, 3, and 4).Serum chemistry (ALP, ALT, total protein, albumin, total cholesterol, triglycerides, sorbitol dehydrogenase, bile acids, and glucose), Histopathology of liver (Studies 8 and 9). Absolute and relative liver weight (Studies 8, 9, 10, and 11).-Nutritional/Metabolic-Terminal body weights (Studies 1, 2, 3, and 4).Body weight, feed consumption (Studies 5, 6, 7, 8, 9, 10, 11, and 12).Body weight gain (Studies 5, 6, 7, and 12).; Low	Marsman et-al 1995 680063

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Dibutyl 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
Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Rat-Fischer 344 - [rat]-Female	Oral-Diet-Duration: Reproductive/Developmental-1-F0 - gestation (20 days) 3. DBP Supp study in utero in rats: Pregnant rats were exposed 7 days/week to undosed or dosed feed for up to 20 days during the gestation period.	**POD: 20000 ppm (in air, water, or food) (NOAEL) -Significant decreases in dam body weights, in the number of fetuses per breeding group, and in fetal liver weights** n= 30 Dose= 0, n= 10 Dose= 1250, n= 10 Dose= 2500, n= 10 Dose= 5000, n= 10 Dose= 7500, n= 10 Dose= 10000, n= 10 Dose= 20000, ppm (in air, water, or food)Total # of generations: 1 Female Exposure: F0 - gestation, 20 days	See footnotes for full summary [9]	Major limitations include the failure to measure or report dam body weights and feed consumption in a dietary study. Because these data are missing, default body weight and feed consumption values will have to be used to determine dosing in mg/kg-day, and the accuracy is a concern. Results for some endpoints described in the methods were not reported. The study was missing starting body weight data for pregnant females, information on allocation procedures, and results for clinical observations. The number of animals per group is unclear due to discrepancies between the text and data tables.	Reproductive/Developmental-No. fetuses/breeding group, Litter weight; Gestation length, number of pups/litter, number of live pups/litter, percentage of live pups/litter, number of pups/sex/litter, Offspring clinical observations, mortality, feed consumption, histologic examinations on >30 organs/tissues, gross necropsy, offspring body weights, number of implantation sites, mating index, fertility index-Hepatic/Liver-Absolute liver weights of dams, palmitoyl-CoA oxidase activity of dams (Studies 1, 2, 3, and 4).Serum chemistry (ALP, ALT, total protein, albumin, total cholesterol, triglycerides, sorbitol dehydrogenase, bile acids, and glucose), Histopathology of liver (Studies 8 and 9). Absolute and relative liver weight (Studies 8, 9, 10, and 11).-Nutritional/Metabolic-Terminal body weights (Studies 1, 2, 3, and 4).Body weight, feed consumption (Studies 5, 6, 7, 8, 9, 10, 11, and 12).Body weight gain (Studies 5, 6, 7, and 12).; Uninformative	Marsman et-al 1995 680063

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Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Rat-Fischer 344 - [rat]-Female	Oral-Diet-Duration: Reproductive/Developmental-1-F0- lactation (21 days) 4. DBP Supp study lactational in rats: Dams were exposed 7 days/week on Days 1 through 22 of lactation.	**POD: 10000 ppm (in air, water, or food) (NOAEL) - Significant decreases in dam body weight, increases in dam absolute liver weight, decreases in pup body weight (males and females), and decreases in pup absolute liver weight (males and females).** n= 12 Dose= 0, n= 12 Dose= 300, n= 12 Dose= 1000, n= 12 Dose= 3000, n= 12 Dose= 10000, n= 12 Dose= 30000, ppm (in air, water, or food)Total # of generations: 1 Female Exposure: F0- lactation, 21 days	See footnotes for full summary [10]	Major limitations include the failure to measure or report dam body weights and feed consumption in a dietary study. Because these data are missing, default body weight and feed consumption values will have to be used to determine dosing in mg/kg-day, and the accuracy is a concern. Results for some endpoints described in the methods were not reported. The study was missing starting body weight data for pregnant females, information on allocation procedures, and results for clinical observations. The number of control animals is not clear.	Reproductive/Developmental-No. fetuses/breeding group, Litter weight; Gestation length, number of pups/litter, number of live pups/litter, percentage of live pups/litter, number of pups/sex/litter, Offspring clinical observations, mortality, feed consumption, histologic examinations on >30 organs/tissues, gross necropsy, offspring body weights, number of implantation sites, mating index, fertility index-Hepatic/Liver-Absolute liver weights of dams, palmitoyl-CoA oxidase activity of dams (Studies 1, 2, 3, and 4).Serum chemistry (ALP, ALT, total protein, albumin, total cholesterol, triglycerides, sorbitol dehydrogenase, bile acids, and glucose), Histopathology of liver (Studies 8 and 9). Absolute and relative liver weight (Studies 8, 9, 10, and 11).-Nutritional/Metabolic-Terminal body weights (Studies 1, 2, 3, and 4).Body weight, feed consumption (Studies 5, 6, 7, 8, 9, 10, 11, and 12).Body weight gain (Studies 5, 6, 7, and 12).; Low	Marsman et-al 1995 680063

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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
Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Rat-Fischer 344 - [rat]-Female	Oral-Diet-Duration: Reproductive/Developmental-1-F0- lactation (21 days) 4. DBP Supp study lactational in rats: Dams were exposed 7 days/week on Days 1 through 22 of lactation.	**POD: 10000 ppm (in air, water, or food) (NOAEL) - Significant decreases in dam body weight, increases in dam absolute liver weight, decreases in pup body weight (males and females), and decreases in pup absolute liver weight (males and females).** n= 12 Dose= 0, n= 12 Dose= 300, n= 12 Dose= 1000, n= 12 Dose= 3000, n= 12 Dose= 10000, n= 12 Dose= 30000, ppm (in air, water, or food)Total # of generations: 1 Female Exposure: F0- lactation, 21 days	See footnotes for full summary [11]	Major limitations include the failure to measure or report dam body weights and feed consumption in a dietary study. Because these data are missing, default body weight and feed consumption values will have to be used to determine dosing in mg/kg-day, and the accuracy is a concern. Results for some endpoints described in the methods were not reported. The study was missing starting body weight data for pregnant females, information on allocation procedures, and results for clinical observations. The number of control animals is not clear.	Reproductive/Developmental-No. fetuses/breeding group, Litter weight; Gestation length, number of pups/litter, number of live pups/litter, percentage of live pups/litter, number of pups/sex/litter, Offspring clinical observations, mortality, feed consumption, histologic examinations on >30 organs/tissues, gross necropsy, offspring body weights, number of implantation sites, mating index, fertility index-Hepatic/Liver-Absolute liver weights of dams, palmitoyl-CoA oxidase activity of dams (Studies 1, 2, 3, and 4).Serum chemistry (ALP, ALT, total protein, albumin, total cholesterol, triglycerides, sorbitol dehydrogenase, bile acids, and glucose), Histopathology of liver (Studies 8 and 9). Absolute and relative liver weight (Studies 8, 9, 10, and 11).-Nutritional/Metabolic-Terminal body weights (Studies 1, 2, 3, and 4).Body weight, feed consumption (Studies 5, 6, 7, 8, 9, 10, 11, and 12).Body weight gain (Studies 5, 6, 7, and 12).; Uninformative	Marsman et-al 1995 680063

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Dibutyl 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
Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Rat-Fischer 344 - [rat]-Female	Oral-Diet-Duration: Reproductive/Developmental-1-F0 - gestation (3 weeks)-F0- lactation (4 weeks)-F1- premating (4 weeks)-F1- premating (4 weeks) 5. DBP MPE Determination study in rats: Dams were exposed 7 days/week throughout gestation (21 days) and lactation (28 days). Pups were weaned on day 28 post-partum and selected pups were placed on the same DBP or control diet as their respective dams for 4 weeks.	**POD: 5000 ppm (in air, water, or food) (LOAEL) -Reduced pup body weights** n= 30 Dose= 0, n= 19 Dose= 1250, n= 18 Dose= 2500, n= 19 Dose= 5000, n= 18 Dose= 7500, n= 18 Dose= 10000, n= 19 Dose= 20000, ppm (in air, water, or food)Total # of generations: 1 Male Exposure: F1- premating, 4 weeks Female Exposure: F0 - gestation, 3 weeks, F0- lactation, 4 weeks, F1- premating, 4 weeks	See footnotes for full summary [12]	Major limitations for this study included uncertainties on exact doses administered to dams (missing feed consumption data, missing calculated dose (mg/kg-day)), missing data for some outcomes described in the methods (sex of pups, litter weights (PND 0 & 1), number of implantation sites in the uteri of female rats exposed to DBP that did not litter), and missing information on when offspring were sacrificed and necropsied. There was a large variation in sample sizes for some endpoints, no explanations were provided and may be an indicator of selective reporting.	Reproductive/Developmental- No. fetuses/breeding group, Litter weight; Gestation length, number of pups/litter, number of live pups/litter, percentage of live pups/litter, number of pups/sex/litter, Offspring clinical observations, mortality, feed consumption, histologic examinations on >30 organs/tissues, gross necropsy, offspring body weights, number of implantation sites, mating index, fertility index-Nutritional/Metabolic-Terminal body weights (Studies 1, 2, 3, and 4).Body weight, feed consumption (Studies 5, 6, 7, 8, 9, 10, 11, and 12).Body weight gain (Studies 5, 6, 7, and 12).; Medium	Marsman et-al 1995 680063

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Dibutyl 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
Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Rat-Fischer 344 - [rat]-Female	Oral-Diet-Duration: Reproductive/Developmental-1-F0 - gestation (3 weeks)-F0- lactation (4 weeks)-F1- premating (4 weeks)-F1- premating (4 weeks) 5. DBP MPE Determination study in rats: Dams were exposed 7 days/week throughout gestation (21 days) and lactation (28 days). Pups were weaned on day 28 post-partum and selected pups were placed on the same DBP or control diet as their respective dams for 4 weeks.	**POD: 5000 ppm (in air, water, or food) (LOAEL) -Reduced pup body weights** n= 30 Dose= 0, n= 19 Dose= 1250, n= 18 Dose= 2500, n= 19 Dose= 5000, n= 18 Dose= 7500, n= 18 Dose= 10000, n= 19 Dose= 20000, ppm (in air, water, or food)Total # of generations: 1 Male Exposure: F1- premating, 4 weeks Female Exposure: F0 - gestation, 3 weeks, F0- lactation, 4 weeks, F1- premating, 4 weeks	See footnotes for full summary [13]	Major limitations for this study included uncertainties on exact doses administered to dams (missing feed consumption data, missing calculated dose (mg/kg-day)), missing data for some outcomes described in the methods (sex of pups, litter weights (PND 0 & 1), number of implantation sites in the uteri of female rats exposed to DBP that did not litter), and missing information on when offspring were sacrificed and necropsied. There was a large variation in sample sizes for some endpoints, no explanations were provided and may be an indicator of selective reporting.	Reproductive/Developmental-No. fetuses/breeding group, Litter weight; Gestation length, number of pups/litter, number of live pups/litter, percentage of live pups/litter, number of pups/sex/litter, Offspring clinical observations, mortality, feed consumption, histologic examinations on >30 organs/tissues, gross necropsy, offspring body weights, number of implantation sites, mating index, fertility index-Nutritional/Metabolic-Terminal body weights (Studies 1, 2, 3, and 4).Body weight, feed consumption (Studies 5, 6, 7, 8, 9, 10, 11, and 12).Body weight gain (Studies 5, 6, 7, and 12).; Medium	Marsman et-al 1995 680063

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Dibutyl 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
Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Rat-Fischer 344 - [rat]-Female	Oral-Diet-Duration: Reproductive/Developmental-1-F0 - gestation (3 weeks)-F0- lactation (4 weeks)-F1- premating (4 weeks)-F1- premating (4 weeks) 5. DBP MPE Determination study in rats: Dams were exposed 7 days/week throughout gestation (21 days) and lactation (28 days). Pups were weaned on day 28 post-partum and selected pups were placed on the same DBP or control diet as their respective dams for 4 weeks.	**POD: 5000 ppm (in air, water, or food) (LOAEL) -Reduced pup body weights** n= 30 Dose= 0, n= 19 Dose= 1250, n= 18 Dose= 2500, n= 19 Dose= 5000, n= 18 Dose= 7500, n= 18 Dose= 10000, n= 19 Dose= 20000, ppm (in air, water, or food)Total # of generations: 1 Male Exposure: F1- premating, 4 weeks Female Exposure: F0 - gestation, 3 weeks, F0- lactation, 4 weeks, F1- premating, 4 weeks	See footnotes for full summary [14]	Major limitations for this study included uncertainties on exact doses administered to dams (missing feed consumption data, missing calculated dose (mg/kg-day)), missing data for some outcomes described in the methods (sex of pups, litter weights (PND 0 & 1), number of implantation sites in the uteri of female rats exposed to DBP that did not litter), and missing information on when offspring were sacrificed and necropsied. There was a large variation in sample sizes for some endpoints, no explanations were provided and may be an indicator of selective reporting.	Reproductive/Developmental-No. fetuses/breeding group, Litter weight; Gestation length, number of pups/litter, number of live pups/litter, percentage of live pups/litter, number of pups/sex/litter, Offspring clinical observations, mortality, feed consumption, histologic examinations on >30 organs/tissues, gross necropsy, offspring body weights, number of implantation sites, mating index, fertility index-Nutritional/Metabolic-Terminal body weights (Studies 1, 2, 3, and 4).Body weight, feed consumption (Studies 5, 6, 7, 8, 9, 10, 11, and 12).Body weight gain (Studies 5, 6, 7, and 12).; Medium	Marsman et-al 1995 680063

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Dibutyl 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
Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Mouse-B6C3F1 - [mouse]-Female	Oral-Diet-Duration: Reproductive/Developmental-1-F0 - gestation (17 days)-F0- lactation (4 weeks)-F1- premating (4 weeks)-F1- premating (4 weeks) 6. DBP MPE Determination study in mice: Dams were exposed 7 days/week throughout gestation (17 days) and lactation (28 days). Pups were weaned on day 28 post-partum and selected pups were placed on the same DBP or control diet as their respective dams for 4 weeks.	**POD: 0 ppm (in air, water, or food) (LOAEL) - Decreased absolute and relative kidney weight in F1 females** n= 20 Dose= 0, n= 19 Dose= 1250, n= 19 Dose= 2500, n= 19 Dose= 5000, n= 18 Dose= 7500, n= 20 Dose= 10000, n= 20 Dose= 20000, ppm (in air, water, or food)Total # of generations: 1 Male Exposure: F1- premating, 4 weeks Female Exposure: F0 - gestation, 17 days, F0- lactation, 4 weeks, F1- premating, 4 weeks	See footnotes for full summary [15]	Major limitations for this study included uncertainties on exact doses administered to dams (missing feed consumption data for dams, missing calculated dose (mg/kg-day) for dams), missing data for some outcomes described in the methods (sex of pups, litter weights (PND 0 & 1), number of implantation sites in the uteri of female mice exposed to DBP that did not litter), and missing information on when offspring were sacrificed and necropsied. Data for several animals were missing for some endpoints, no explanations were provided and it is unclear if this is suggestive of selective reporting.	Reproductive/Developmental-No. fetuses/breeding group, Litter weight; Gestation length, number of pups/litter, number of live pups/litter, percentage of live pups/litter, number of pups/sex/litter, Offspring clinical observations, mortality, feed consumption, histologic examinations on >30 organs/tissues, gross necropsy, offspring body weights, number of implantation sites, mating index, fertility index-Nutritional/Metabolic-Terminal body weights (Studies 1, 2, 3, and 4).Body weight, feed consumption (Studies 5, 6, 7, 8, 9, 10, 11, and 12).Body weight gain (Studies 5, 6, 7, and 12).-Other (please specify below) (Clinical observations)-Clinical Observations-Mortality-Survival (Studies 5, 6, 7, 8, 9, 10, 11, and 12).; Low	Marsman et-al 1995 680063

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Dibutyl 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
Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Mouse-B6C3F1 - [mouse]-Female	Oral-Diet-Duration: Reproductive/Developmental-1-F0 - gestation (17 days)-F0- lactation (4 weeks)-F1- premating (4 weeks)-F1- premating (4 weeks) 6. DBP MPE Determination study in mice: Dams were exposed 7 days/week throughout gestation (17 days) and lactation (28 days). Pups were weaned on day 28 post-partum and selected pups were placed on the same DBP or control diet as their respective dams for 4 weeks.	**POD: 0 ppm (in air, water, or food) (LOAEL) - Decreased absolute and relative kidney weight in F1 females** n= 20 Dose= 0, n= 19 Dose= 1250, n= 19 Dose= 2500, n= 19 Dose= 5000, n= 18 Dose= 7500, n= 20 Dose= 10000, n= 20 Dose= 20000, ppm (in air, water, or food)Total # of generations: 1 Male Exposure: F1- premating, 4 weeks Female Exposure: F0 - gestation, 17 days, F0- lactation, 4 weeks, F1- premating, 4 weeks	See footnotes for full summary [16]	Major limitations for this study included uncertainties on exact doses administered to dams (missing feed consumption data for dams, missing calculated dose (mg/kg-day) for dams), missing data for some outcomes described in the methods (sex of pups, litter weights (PND 0 & 1), number of implantation sites in the uteri of female mice exposed to DBP that did not litter), and missing information on when offspring were sacrificed and necropsied. Data for several animals were missing for some endpoints, no explanations were provided and it is unclear if this is suggestive of selective reporting.	Reproductive/Developmental-No. fetuses/breeding group, Litter weight; Gestation length, number of pups/litter, number of live pups/litter, percentage of live pups/litter, number of pups/sex/litter, Offspring clinical observations, mortality, feed consumption, histologic examinations on >30 organs/tissues, gross necropsy, offspring body weights, number of implantation sites, mating index, fertility index-Nutritional/Metabolic-Terminal body weights (Studies 1, 2, 3, and 4).Body weight, feed consumption (Studies 5, 6, 7, 8, 9, 10, 11, and 12).Body weight gain (Studies 5, 6, 7, and 12).-Other (please specify below) (Clinical observations)-Clinical Observations-Mortality-Survival (Studies 5, 6, 7, 8, 9, 10, 11, and 12).; Medium	Marsman et-al 1995 680063

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Dibutyl 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
Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Mouse-B6C3F1 - [mouse]-Female	Oral-Diet-Duration: Reproductive/Developmental-1-F0 - gestation (17 days)-F0- lactation (4 weeks)-F1- premating (4 weeks)-F1- premating (4 weeks) 6. DBP MPE Determination study in mice: Dams were exposed 7 days/week throughout gestation (17 days) and lactation (28 days). Pups were weaned on day 28 post-partum and selected pups were placed on the same DBP or control diet as their respective dams for 4 weeks.	**POD: 0 ppm (in air, water, or food) (LOAEL) - Decreased absolute and relative kidney weight in F1 females** n= 20 Dose= 0, n= 19 Dose= 1250, n= 19 Dose= 2500, n= 19 Dose= 5000, n= 18 Dose= 7500, n= 20 Dose= 10000, n= 20 Dose= 20000, ppm (in air, water, or food)Total # of generations: 1 Male Exposure: F1- premating, 4 weeks Female Exposure: F0 - gestation, 17 days, F0- lactation, 4 weeks, F1- premating, 4 weeks	See footnotes for full summary [17]	Major limitations for this study included uncertainties on exact doses administered to dams (missing feed consumption data for dams, missing calculated dose (mg/kg-day) for dams), missing data for some outcomes described in the methods (sex of pups, litter weights (PND 0 & 1), number of implantation sites in the uteri of female mice exposed to DBP that did not litter), and missing information on when offspring were sacrificed and necropsied. Data for several animals were missing for some endpoints, no explanations were provided and it is unclear if this is suggestive of selective reporting.	Reproductive/Developmental-No. fetuses/breeding group, Litter weight; Gestation length, number of pups/litter, number of live pups/litter, percentage of live pups/litter, number of pups/sex/litter, Offspring clinical observations, mortality, feed consumption, histologic examinations on >30 organs/tissues, gross necropsy, offspring body weights, number of implantation sites, mating index, fertility index-Nutritional/Metabolic-Terminal body weights (Studies 1, 2, 3, and 4).Body weight, feed consumption (Studies 5, 6, 7, 8, 9, 10, 11, and 12).Body weight gain (Studies 5, 6, 7, and 12).-Other (please specify below) (Clinical observations)-Clinical Observations-Mortality-Survival (Studies 5, 6, 7, 8, 9, 10, 11, and 12).; Medium	Marsman et-al 1995 680063

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Dibutyl 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
Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Rat-Fischer 344 - [rat]-Female	Oral-Diet-Duration: Reproductive/Developmental-1-F0 - gestation (3 weeks (at 0 or 10000 ppm))-F0-lactation (4 weeks (at 0 or 10000 ppm))-F1- premating (17 weeks (4 weeks at 0 or 10,000 ppm; 13 weeks at 0, 2500, 5000, 10000, 20000, or 40000 ppm))-F1-premating (17 weeks (4 weeks at 0 or 10,000 ppm; 13 weeks at 0, 2500, 5000, 10000, 20000, or 40000 ppm)) 7. DBP 13-week feed study w/ perinatal in rats: Dams were exposed 7 days/week throughout gestation (20 days) and lactation (28 days). Pups were weaned on day 28 post-partum and selected pups were placed on the same DBP or control diet as their respective dams for 4 weeks. At the conclusion of the 4 week exposure period, F1 animals were maintained on DBP dosed or control feed for 13 weeks.	**POD: 10000 ppm (in air, water, or food) (LOAEL) - Decreased number of live pups per litter.** n= 12 Dose= 0, n= 71 Dose= 10000, ppm (in air, water, or food)Total # of generations: 1 Male Exposure: F1-premating, 17 weeks (4 weeks at 0 or 10,000 ppm; 13 weeks at 0, 2500, 5000, 10000, 20000, or 40000 ppm) Female Exposure: F0 - gestation, 3 weeks (at 0 or 10000 ppm), F0- lactation, 4 weeks (at 0 or 10000 ppm), F1- premating, 17 weeks (4 weeks at 0 or 10,000 ppm; 13 weeks at 0, 2500, 5000, 10000, 20000, or 40000 ppm)	See footnotes for full summary [18]	Major limitations for this study included uncertainties on exact doses administered to dams (missing feed consumption data for dams, missing calculated dose (mg/kg-day) for dams), missing data for some outcomes described in the methods (sex of pups, litter weights (PND 0 & 1)), and missing information on when offspring were sacrificed and necropsied. Data for several animals were missing for some endpoints, no explanations were provided and it is unclear if this is suggestive of selective reporting.	Reproductive/Developmental: No. fetuses/breeding group, Litter weight; Gestation length, number of pups/litter, number of live pups/litter, percentage of live pups/litter, number of pups/sex/litter, Offspring clinical observations, mortality, feed consumption, histologic examinations on >30 organs/tissues, gross necropsy, offspring body weights, number of implantation sites, mating index, fertility index; Medium	Marsman et-al 1995 680063

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Dibutyl 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
Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Rat-Fischer 344 - [rat]-Female	Oral-Diet-Duration: Reproductive/Developmental-1-F0 - gestation (3 weeks (at 0 or 10000 ppm))-F0-lactation (4 weeks (at 0 or 10000 ppm))-F1- premating (17 weeks (4 weeks at 0 or 10,000 ppm; 13 weeks at 0, 2500, 5000, 10000, 20000, or 40000 ppm))-F1-premating (17 weeks (4 weeks at 0 or 10,000 ppm; 13 weeks at 0, 2500, 5000, 10000, 20000, or 40000 ppm)) 7. DBP 13-week feed study w/ perinatal in rats: Dams were exposed 7 days/week throughout gestation (20 days) and lactation (28 days). Pups were weaned on day 28 post-partum and selected pups were placed on the same DBP or control diet as their respective dams for 4 weeks. At the conclusion of the 4 week exposure period, F1 animals were maintained on DBP dosed or control feed for 13 weeks.	**POD: 10000 ppm (in air, water, or food) (LOAEL) - Decreased number of live pups per litter.** n= 12 Dose= 0, n= 71 Dose= 10000, ppm (in air, water, or food)Total # of generations: 1 Male Exposure: F1-premating, 17 weeks (4 weeks at 0 or 10,000 ppm; 13 weeks at 0, 2500, 5000, 10000, 20000, or 40000 ppm) Female Exposure: F0 - gestation, 3 weeks (at 0 or 10000 ppm), F0- lactation, 4 weeks (at 0 or 10000 ppm), F1- premating, 17 weeks (4 weeks at 0 or 10,000 ppm; 13 weeks at 0, 2500, 5000, 10000, 20000, or 40000 ppm)	See footnotes for full summary [19]	Major limitations for this study included uncertainties on exact doses administered to dams (missing feed consumption data for dams, missing calculated dose (mg/kg-day) for dams), missing data for some outcomes described in the methods (sex of pups, litter weights (PND 0 & 1)), and missing information on when offspring were sacrificed and necropsied. Data for several animals were missing for some endpoints, no explanations were provided and it is unclear if this is suggestive of selective reporting.	Reproductive/Developmental-No. fetuses/breeding group, Litter weight; Gestation length, number of pups/litter, number of live pups/litter, percentage of live pups/litter, number of pups/sex/litter, Offspring clinical observations, mortality, feed consumption, histologic examinations on >30 organs/tissues, gross necropsy, offspring body weights, number of implantation sites, mating index, fertility index; Medium	Marsman et-al 1995 680063

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Dibutyl 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
Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Rat-Fischer 344 - [rat]-Female	Oral-Diet-Duration: Reproductive/Developmental-1-F0 - gestation (3 weeks (at 0 or 10000 ppm))-F0-lactation (4 weeks (at 0 or 10000 ppm))-F1- premating (17 weeks (4 weeks at 0 or 10,000 ppm; 13 weeks at 0, 2500, 5000, 10000, 20000, or 40000 ppm))-F1-premating (17 weeks (4 weeks at 0 or 10,000 ppm; 13 weeks at 0, 2500, 5000, 10000, 20000, or 40000 ppm)) 7. DBP 13-week feed study w/ perinatal in rats: Dams were exposed 7 days/week throughout gestation (20 days) and lactation (28 days). Pups were weaned on day 28 post-partum and selected pups were placed on the same DBP or control diet as their respective dams for 4 weeks. At the conclusion of the 4 week exposure period, F1 animals were maintained on DBP dosed or control feed for 13 weeks.	**POD: 10000 ppm (in air, water, or food) (LOAEL) - Decreased number of live pups per litter.** n= 12 Dose= 0, n= 71 Dose= 10000, ppm (in air, water, or food)Total # of generations: 1 Male Exposure: F1-premating, 17 weeks (4 weeks at 0 or 10,000 ppm; 13 weeks at 0, 2500, 5000, 10000, 20000, or 40000 ppm) Female Exposure: F0 - gestation, 3 weeks (at 0 or 10000 ppm), F0- lactation, 4 weeks (at 0 or 10000 ppm), F1- premating, 17 weeks (4 weeks at 0 or 10,000 ppm; 13 weeks at 0, 2500, 5000, 10000, 20000, or 40000 ppm)	See footnotes for full summary [20]	Major limitations for this study included uncertainties on exact doses administered to dams (missing feed consumption data for dams, missing calculated dose (mg/kg-day) for dams), missing data for some outcomes described in the methods (sex of pups, litter weights (PND 0 & 1)), and missing information on when offspring were sacrificed and necropsied. Data for several animals were missing for some endpoints, no explanations were provided and it is unclear if this is suggestive of selective reporting.	Reproductive/Developmental- No. fetuses/breeding group, Litter weight; Gestation length, number of pups/litter, number of live pups/litter, percentage of live pups/litter, number of pups/sex/litter, Offspring clinical observations, mortality, feed consumption, histologic examinations on >30 organs/tissues, gross necropsy, offspring body weights, number of implantation sites, mating index, fertility index; Medium	Marsman et-al 1995 680063

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Dibutyl 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
Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Rat-Fischer 344 - [rat]-Female	Oral-Diet-Duration: Reproductive/Developmental-1-F0 - gestation (3 weeks (at 0 or 10000 ppm))-F0-lactation (4 weeks (at 0 or 10000 ppm))-F1- premating (17 weeks (4 weeks at 0 or 10,000 ppm; 13 weeks at 0, 2500, 5000, 10000, 20000, or 40000 ppm))-F1-premating (17 weeks (4 weeks at 0 or 10,000 ppm; 13 weeks at 0, 2500, 5000, 10000, 20000, or 40000 ppm)) 7. DBP 13-week feed study w/ perinatal in rats: Dams were exposed 7 days/week throughout gestation (20 days) and lactation (28 days). Pups were weaned on day 28 post-partum and selected pups were placed on the same DBP or control diet as their respective dams for 4 weeks. At the conclusion of the 4 week exposure period, F1 animals were maintained on DBP dosed or control feed for 13 weeks.	**POD: 10000 ppm (in air, water, or food) (LOAEL) - Decreased number of live pups per litter.** n= 12 Dose= 0, n= 71 Dose= 10000, ppm (in air, water, or food)Total # of generations: 1 Male Exposure: F1-premating, 17 weeks (4 weeks at 0 or 10,000 ppm; 13 weeks at 0, 2500, 5000, 10000, 20000, or 40000 ppm) Female Exposure: F0 - gestation, 3 weeks (at 0 or 10000 ppm), F0- lactation, 4 weeks (at 0 or 10000 ppm), F1- premating, 17 weeks (4 weeks at 0 or 10,000 ppm; 13 weeks at 0, 2500, 5000, 10000, 20000, or 40000 ppm)	See footnotes for full summary [21]	Major limitations for this study included uncertainties on exact doses administered to dams (missing feed consumption data for dams, missing calculated dose (mg/kg-day) for dams), missing data for some outcomes described in the methods (sex of pups, litter weights (PND 0 & 1)), and missing information on when offspring were sacrificed and necropsied. Data for several animals were missing for some endpoints, no explanations were provided and it is unclear if this is suggestive of selective reporting.	Reproductive/Developmental-No. fetuses/breeding group, Litter weight; Gestation length, number of pups/litter, number of live pups/litter, percentage of live pups/litter, number of pups/sex/litter, Offspring clinical observations, mortality, feed consumption, histologic examinations on >30 organs/tissues, gross necropsy, offspring body weights, number of implantation sites, mating index, fertility index; Medium	Marsman et-al 1995 680063

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Dibutyl 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
Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Rat-Sprague-Dawley - [rat]-Both	Oral-Diet-Duration: Reproductive/Developmental-2-F0- premating (1 week)-F0- mating-F0 - gestation (3 weeks)-F0- lactation (4 weeks (F1e litter only))-F1- premating (77 days (F1e litter only))-F1- mating (7 days (F1e only))-F1 - gestation (3 weeks)-F0- premating (1 week)-F1- premating (77 days (F1e litter only))-F1- mating (7 days (F1e only)) 10. DBP Continuous breeding study in rats: F0 male and female rats were exposed to DBP for 1 week prior to cohabitation. F0 animals were co-housed for 16 weeks for the generation of 5 litters. F0 males and females were then separated and were continued on the exposure diets through delivery and weaning of the final litter. F1e offspring were continued on the same exposure diets as parents for ~77 days (male and female) and mated for 7 days to generate F2 pups. F0 males and females were then used for crossover mating trials.	**POD: 66 mg/kg-bw/day (LOAEL) -Decreases in F0 dam body weights during lactation, in the number of combined (M+F) live pups per litter, and in F2 female pup weights, total live pup weights, and adjusted live pup weights** n= 40 Dose= 0, n= 20 Dose= 66, n= 20 Dose= 320, n= 20 Dose= 651, mg/kg-bw/dayTotal # of generations: 2 Male Exposure: F0- premating, 1 week, F1- premating, 77 days (F1e litter only), F1- mating, 7 days (F1e only) Female Exposure: F0- premating, 1 week, F0- mating, F0 - gestation, 3 weeks, F0- lactation, 4 weeks (F1e litter only), F1- premating, 77 days (F1e litter only), F1- mating, 7 days (F1e only), F1 - gestation, 3 weeks	See footnotes for full summary [22]	Major limitations of this study included some missing important information.	Reproductive/Developmental-No. fetuses/breeding group, Litter weight; Gestation length, number of pups/litter, number of live pups/litter, percentage of live pups/litter, number of pups/sex/litter, Offspring clinical observations, mortality, feed consumption, histologic examinations on >30 organs/tissues, gross necropsy, offspring body weights, number of implantation sites, mating index, fertility index-Hepatic/Liver-Absolute liver weights of dams, palmitoyl-CoA oxidase activity of dams (Studies 1, 2, 3, and 4).Serum chemistry (ALP, ALT, total protein, albumin, total cholesterol, triglycerides, sorbitol dehydrogenase, bile acids, and glucose), Histopathology of liver (Studies 8 and 9). Absolute and relative liver weight (Studies 8, 9, 10, and 11).-Nutritional/Metabolic-Terminal body weights (Studies 1, 2, 3, and 4).Body weight, feed consumption (Studies 5, 6, 7, 8, 9, 10, 11, and 12).Body weight gain (Studies 5, 6, 7, and 12).-Renal/Kidney-Clinical chemistry (BUN, creatinine), Histopathology of	Marsman et-al 1995 680063

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Dibutyl 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
Study was performed in compliance with USFDA Good Laboratory Practices regulations (21 CFR, Part 58). Mouse-CD-1 - [mouse]-Both	Oral-Diet-Duration: Reproductive/Developmental-1-F0- premating (7 days)-F0 - gestation (17 days)-F0- lactation (28 days)-F0- premating (7 days) 11. DBP Continuous breeding study in mice: F0 male and female mice were exposed to DBP for 1 week prior to cohabitation. F0 animals were co-housed for 14 weeks for the generation of 5 litters. F0 males and females were then separated and were continued on the exposure diets through delivery and weaning of the final litter. F0 males and females were then used for crossover mating trail.	**POD: 3000 ppm (in air, water, or food) (NOAEL) -Effects on reproduction and fertility.** n= 40 Dose= 0, n= 20 Dose= 300, n= 20 Dose= 3000, n= 20 Dose= 10000, ppm (in air, water, or food)Total # of generations: 1 Male Exposure: F0- premating, 7 days Female Exposure: F0- premating, 7 days, F0 - gestation, 17 days, F0- lactation, 28 days	See footnotes for full summary [23]	Major limitations of this study included some missing important information.	Reproductive/Developmental-No. fetuses/breeding group, Litter weight; Gestation length, number of pups/litter, number of live pups/litter, percentage of live pups/litter, number of pups/sex/litter, Offspring clinical observations, mortality, feed consumption, histologic examinations on >30 organs/tissues, gross necropsy, offspring body weights, number of implantation sites, mating index, fertility index-Hepatic/Liver-Absolute liver weights of dams, palmitoyl-CoA oxidase activity of dams (Studies 1, 2, 3, and 4).Serum chemistry (ALP, ALT, total protein, albumin, total cholesterol, triglycerides, sorbitol dehydrogenase, bile acids, and glucose), Histopathology of liver (Studies 8 and 9). Absolute and relative liver weight (Studies 8, 9, 10, and 11).-Nutritional/Metabolic-Terminal body weights (Studies 1, 2, 3, and 4).Body weight, feed consumption (Studies 5, 6, 7, 8, 9, 10, 11, and 12).Body weight gain (Studies 5, 6, 7, and 12).-Mortality-Survival (Studies 5, 6, 7, 8, 9, 10, 11, and 12).; High	Marsman et-al 1995 680063

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Dibutyl 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 use of GLP conditions was specified. Rat-Wistar - [rat]- Female	Oral-Gavage-Duration: Reproductive/Developmental- F0 - gestation (GD13-GD21) Dams were dosed daily from GD13-GD21	**POD: 100 mg/kg-bw/day (LOAEL) -reduced male AGD (mm/cube root body weight) on GD21** n= 7 Dose= 0, n= 8 Dose= 100, n= 7 Dose= 500, mg/kg-bw/day Female Exposure: F0 - gestation, GD13-GD21	Pregnant Wistar rats were gavaged with 0 (corn oil), 100, or 500 mg/kg-day DBP from GD 13 to GD 21 (N= 7-8 dams/dose). Dams were sacrificed on GD 21. There were no significant reductions in dam body weight and no differences in the number of implantations, (i.e., no signs of maternal toxicity). Fetal testes were homogenized for testosterone measurements. Decreased AGD (mm/cube root BW) was observed at 100 mg/kg-day (8%). Decreased AGD (mm; 12%) was observed at 500 mg/kg-day. Fetal testicular testosterone was reduced at 100 (29%) and 500 mg/kg-day(63%), reaching statistical significance at 500 mg/kg-day. A LOAEL of 100 mg/kg-day was determined based on significant reductions in male AGD (mm/cube root BW) on GD21.	No major limitations were identified	Reproductive/Development; Testicular testosterone levels; Medium	Martino-Andrade et. al 2008 676281

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Dibutyl 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 does not report any compliance guidelines adhered to. Mouse-C57BL - [mouse]-Male	Oral-Gavage-Duration: Reproductive/Developmental- F1- post-natal (PND4-21) Male pups were dosed from PND4- 21 via gavage	**POD: 0 mg/kg-bw/day (LOAEL) -Developmental effect on testis** Dose= 0, Dose= 1, Dose= 10, Dose= 50, Dose= 100, Dose= 250, Dose= 500, mg/kg-bw/day Male Exposure: F1-post-natal, PND4-21	See footnotes for full summary [24]	Purity of test substance not reported. Preparation and storage of test substance not adequately reported.	Reproductive/Developmental- Body weight, gross morphology of testis, organ weight (testis, spleen, kidney, liver, and heart), serum FSH, inhibin and testosterone levels, level of proliferation or Sertoli cells (PCNA staining), and apoptosis in testes (cleaved caspase 3 and TUNEL staining), development of Sertoli cells (PND 14; via immunohistochemistry and Western blot for SOX9 and anti-Mullerian hormone [AMH]) histopathology on testes, assessment of spermatogenesis, Immunohistochemistry in testis for connexin 43, inhibin -alpha subunit, germ cell nuclear antigen; Western blot AMH, Cx43, Sox9, alpha-tubulin, cleaved caspase 3.; Medium	Moody et. al- 2013 1639195

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Dibutyl 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 were reported by the authors Rat-Sprague-Dawley - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-F0 - gestation (12-21)	**POD: 500 mg/kg-bw/day (NOAEL) -No effect on maternal body weight, body weight gain, or food consumption** n= 20 Dose= 0, n= 20 Dose= 0.5, n= 19 Dose= 5, n= 20 Dose= 50, n= 20 Dose= 100, n= 11 Dose= 500, mg/kg-bw/day Female Exposure: F0 - gestation, 12-21	See footnotes for full summary [25]	This study had few limitations beyond those listed for other endpoints.	Nutritional/Metabolic-Dam body weight, body weight gain, food consumption; High	Mylchreest et. al 2000 673305
No guidelines were reported by the authors Rat-Sprague-Dawley - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-F0 - gestation (12-21)	**POD: 500 mg/kg-bw/day (NOAEL) -No effect on maternal liver, kidney, or adrenal weights** n= 20 Dose= 0, n= 20 Dose= 0.5, n= 19 Dose= 5, n= 20 Dose= 50, n= 20 Dose= 100, n= 11 Dose= 500, mg/kg-bw/day Female Exposure: F0 - gestation, 12-21	See footnotes for full summary [26]	weights of the organs are the only endpoint. There were no clinical chemistry or histopathology endpoints.	Hepatic/Liver-Liver weight-Renal/Kidney-Kidney weight-Other (please specify below) (endocrine)-adrenal gland weight; Medium	Mylchreest et. al 2000 673305

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Dibutyl 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 were reported by the authors Rat-Sprague-Dawley - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-F0 - gestation (12-21)	**POD: 50 mg/kg-bw/day (NOAEL) -Increased nipple retention in male F1 offspring** n= 20 Dose= 0, n= 20 Dose= 0.5, n= 19 Dose= 5, n= 20 Dose= 50, n= 20 Dose= 100, n= 11 Dose= 500, mg/kg-bw/day Female Exposure: F0 - gestation, 12-21	See footnotes for full summary [27]	This study was conducted in accordance with OECD TG 414 and had few limitations. Nevertheless, limitations included the lack of other adverse reproductive effects beyond nipple retention at the same dose. Additionally, the data presented in graphs were difficult to read, but the accompanying results presentation in the text provided sufficient information.	Reproductive/Developmental F0: Organ weights (uterus, ovaries), implantation sites. F1:numbers of live and dead pups, sex, pups signs of toxicity, pup weights, AGD, male nipple/areolae count, vaginal opening or preputial separation, necropsy, organ weights (ovaries, testes, seminal vesicles, epididymides, vas deferens, ventral prostate, levator ani-bulbocavernosus muscle), histopathology of male reproductive tissues; High	Mylchreest et-al 2000 673305

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Dibutyl 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-Long-Evans - [rat]-Female	Oral-Diet-Duration: Reproductive/Developmental-1-F0- premating (unclear 2-2.5 months)-F0- mating (NR)-F0 - gestation (NR)-F0- lactation (NR)-F1- premating (PND 22 - up to PND 41) There is some uncertainty surrounding the duration of exposure. In one part of the paper the authors state that females were exposed for 2 months and in another section it is stated that they were exposed for 2.5 months. It is also not known whether the females were exposed to the DBP-dosed chow during mating. The authors state that the females were exposed to their respective control or DBP-dosed diets during pregnancy. However, it is not known whether they were still receiving DBP-dosed food after birth, during the lactation period. After weaning, pups were placed on the respective maternal diets until developmental milestones were hit.	**POD: g/kg food (Other) -** n= 15 Dose= 0, n= 15 Dose= 0.61, n= 15 Dose= 2.5, g/kg foodTotal # of generations: 1 Female Exposure: F0- premating, unclear 2-2.5 months, F0- mating, NR, F0 - gestation, NR, F0- lactation, NR, F1- premating, PND 22 - up to PND 41	See footnotes for full summary [28]	Major limitations include poor reporting on methods (e.g., animal husbandry conditions, number of animals per cage at the start of the study), missing purity information for the test substance, uncertainty surrounding the duration of exposure to the test substance, missing body weight data for dams throughout the experiment, missing analytical verification of the test substance concentration in chow, small sample size, limited number of exposure groups, missing data for some endpoints, and missing or inappropriate statistical comparisons. In addition, since food consumption was not monitored, it is possible that the dosed food may have decreased food palatability and resulted in decreased food consumption by the dams. The inability to confirm dosing renders this study uninformative.	Reproductive/Developmental- Percentage of pregnant rats; Litter size (PND0, 2, and 6); Pup survival; Female:male ratio of pups (PND2, PND6); Body weights of pups (PND2, PND6); Days to eyes' opening (assessed PND6 onwards); Male pup body weight (PND14); Testis relative weight of male pups (PND14); Thymus relative weight of male pups (PND14); Plasma of male pups (PND14); Days to vaginal opening and first estrous in female pups; Days to pre-putial separation in male pups- Nutritional/Metabolic- Dam body weights; Total dam body weight gain (g/3 months); Uninformative	Salazar et. al- 2004 673308

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Dibutyl 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 use of GLP was specified. Rat-Sprague-Dawley - [rat]-Female	Oral-Diet-Duration: Reproductive/Developmental-1-F0 - gestation (GD 12-GD 19) Dams exposed from GD 12 through the morning of GD 19	**POD: 112 mg/kg-bw/day (LOAEL) -Decreased concentration of testicular testosterone** n= 9 Dose= 0, n= 7 Dose= 112, n= 7 Dose= 582, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 12- GD 19	Pregnant female Sprague-Dawley rats were fed diets containing varying levels of DBP (0, 100, or 500 mg/kg/day; actual intake recorded as 0, 112, and 582 mg/kg/day) from GD 12 - 19 and allowed either 4 hour or 24 hour recovery where all groups received control diet before data collection (control diets had N = 9 dams/dose/recovery-group while dose groups had 7 dams/dose/recovery-group). Rats were assigned to a treatment group by body weight randomization using Provantis to ensure equal distribution among groups. No significant changes in dam body weight was observed (data not presented). Testicular testosterone was measured in male offspring from each dam/litter and found to be decreased (~70% reduction vs. control) in the 112 mg/kg/day group following a 4 hour recovery (LOAEL) and a decrease in both dose groups (~90-95% reduction vs. control) following a 24 hour recovery.	All diets were administered on a mg/kg body weight basis and were adjusted for predicted feed consumption and maternal body weight changes; although measures were taken (i.e., DBP metabolite measurement in blood and tissues). However, to maximize the endpoints that could be evaluated while minimizing the total number of animals used, only 1 male per litter/dose/recovery-group was used. Although the number of litters was considered moderate (N = 7-9) the representation of each metric per litter is less clear; however, this does not significantly impact the final interpretation of the reported LOAEL.	Reproductive/Developmental; Fetal testosterone; Medium	Struve et. al-2009 684035

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Dibutyl 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 authors report using OECD TG 414 and 421 as guidelines when describing their experimental design. Rat-Sprague-Dawley - [rat]-Female	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD1-)-F0-lactation (-PND21) Animals were exposed from GD1-PND21	**POD: 250 mg/kg (LOAEL) - Decreased offspring birth weight, decreased offspring AGD, decreased offspring absolute right epididymis weight, reduced offspring percent of motile sperm and total sperm heads per testis and per gram of testis, degeneration of the germinal epithelium, smaller seminiferous tubule diameter.** n= 16 Dose= 0, n= 16 Dose= 50, n= 16 Dose= 250, n= 14 Dose= 500, mg/kgTotal # of generations: 1 Female Exposure: F0 - gestation, GD1-, F0- lactation, -PND21	See footnotes for full summary [29]	Limitations of this study include possible attrition, uncertainty with starting sample size of pregnant dams and/or unit of sampling (given that 14-16 litters are reported, but some endpoints report using a sample size of 20 or more) and assessors were not blinded for some subjective outcomes including evaluation of external genital malformations.	Reproductive/Developmental- Live pups per litter, sex ratio of live fetuses, birth weight of live pups, survival until weaning, anogenital distance (AGD) on PND 4, weekly body weights of offspring, post-mortem examination of offspring with body weights, testes and epididymides weights on PND 14, and 21 and liver, kidney, pituitary gland, testes, epididymides and prostate weights on PND 70. Position of testes, gross morphology of genitalia at necropsy, histopathology of testes. Sperm number, motility and malformation rate and total sperm heads per testis.; Medium	Zhang et. al-2004 676600

* Overall Quality Determination

[1] 1325348: In a developmental toxicity study conducted to examine the effects of DBP exposure during gestation and lactation on male rat sexual development, timed-pregnant female Sprague-Dawley (Crl:CD(SD)) rats were exposed to the test substance, DBP, in the diet at concentrations of 0 and 7600 ppm (target doses: 0 and 500 mg/kg/day, respectively) from gestation day (GD) 12 to postnatal day (PND) 14. In this study, DBP served as a positive control for groups exposed to DINP or the negative control (see separate data evaluation and extraction for DINP). Based on maternal body weights and food consumption, average maternal doses for the DBP exposure group were 642 mg/kg/day for GD 13-20 and 1138 mg/kg/day for PND 2-14. The time-weighted average was calculated as follows: [(642 mg/kg/day x 8 days) + (1138 mg/kg/day x 13 days)]/21 days = 949 mg/kg/dayMaternal body weights and food consumption were recorded 4 days/week. On PND 2, the number of live pups per litter were counted and male pups were weighed. Anogenital distance (AGD) was measured. On PND 2, one male pup from each litter was randomly selected for necropsy and right testis and epididymis were collected for histopathology and testosterone measurements. Plasma samples were also collected and stored for metabolite analysis. Litters were culled to eight pups, with up to five male pups included, along with females, for a total of eight pups per litter. The left testis and epididymis were weighed. Blood samples and testes were collected for metabolite or testosterone analysis, respectively, from extra male pups. On PND 14, male pup body weight, AGD, and nipple/areolae were measured. On PND 21, maternal animals and female pups were euthanized. Male pups remained housed with littermates and were weaned. On PND 49-50, all remaining male rats were weighed and euthanized. AGD was measured and pups were examined in situ for retained nipples and the genital tract and urogenital tract were examined. The right and left gubernacular cord lengths were measured and any abnormalities such as undescended testes and epididymal agenesis, were recorded. Reproductive and non-reproductive tissues were examined in situ and weights were determined for the following: testes (right and left), epididymis (right and left), seminal vesicles (pair), glans penis, ventral prostate, levator ani plus bulbocavernosus (LABC) muscles, Cowper's glands (pair), kidney (pair), liver, and adrenal glands (pair). The right testis and epididymis were collected from one male per litter for histopathology and testosterone measurements. Animal necropsies were divided over two days due to the large number of animals. All of the treatment groups were represented on each necropsy day. No significant effects on maternal body weight, body weight gain, or food consumption were observed. There were no significant differences in the number of live pups or number of live pups per litter on PND 2, or on male pup body weight on PND 2 or 14, or on PND 49-50 at study termination, compared to controls. For DBP-exposed male pups, on PNDs 2 and 14, there were significant decreases in absolute AGD (11% and 9%, respectively) and scaled AGD (AGD/BW^1/3; 10% and 9%, respectively), compared to the control group. No significant effects on absolute or scaled AGD were observed in pups examined on PND 49-50. On PND2, relative testis weight was significantly decreased (20%) compared to control. No significant difference in relative epididymis weight was seen at PND2 compared to control. Gross necropsy of pups on PND 49-50 revealed a significant increase in the incidence of total litters with epididymis malformations, including incomplete epididymis (0/24 and 8/21 for the control and DBP-exposed groups, respectively) and flaccid epididymis (2/24 and 7/21 for the control and DBP-exposed groups, respectively). A significant increase in the incidence of total litters with unilateral enlarged testis was observed (0/24 and 5/21 for control and DBP-exposed groups, respectively). No other significant effects on gross findings of the reproductive organs were observed at necropsy. For organ weight measurements in the DBP-exposed group of pups examined on PND 49-50, there were significant decreases in absolute and relative weights of the seminal vesicles (23 and 20%, respectively) and LABC muscle (16% and 15%, respectively), and relative weight of the ventral prostate (13%), compared to the control group. There were no significant differences in absolute or relative (to body weight) weights of the testes or epididymis, testis testosterone level, or gubernacular cord length on PND 49-50. The number of nipples/areolae was significantly increased in DBP-exposed pups on PND 14 (222%) and PND 49-50 (317%), compared to the control group. For histopathology, in pups examined on PND 2, there were significant increases in the incidence of pups with histopathological changes in the testes, which included multinucleated germ cells (MNGs; incidences of 1/24 and 21/21 for the control and DBP-exposed groups, respectively) and large Leydig cell aggregates (LCA; incidences of 4/24 and 18/21 for the control and DBP-exposed groups, respectively), compared to the control group. No significant increases in the incidence in histopathology findings in the testes were observed in pups examined on PND 49-50. In pups examined for metabolites of DBP on PND 2, monobutyl phthalate (MBP) was identified at a concentration of 2.81 µM. This metabolite was not detected in plasma collected from control group animals. The study authors did not report a NOAEL or LOAEL value. The NOAEL for systemic effects in maternal animals (determined by the reviewer) is 7600 ppm (949 mg/kg/day) based on no observed effects on the maternal toxicity endpoints evaluated. The LOAEL for developmental effects (determined by the reviewer) is 7600 ppm (949 mg/kg/day) based on decreased AGD and scaled AGD, increased number of nipples/areolae, histopathological changes in the testes, including increased incidences of MNGs and LCAs, and increased absolute and relative weights of the seminal vesicles and LABC muscles in pups at the only dose tested.

[2] 61566: In a continuous breeding study, CD-1 albino mice (40/sex in the control group and 20/sex/treatment group) were administered di-n-butyl phthalate (DBP; 99% purity) in the diet at concentrations of 0, 0.03, 0.3, and 1.0%. 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, pituitary gland, and brain [females only]), histopathology on reproductive organs (testis, epididymis, prostate, seminal vesicles, ovary, oviduct, uterus, and vagina), and sperm effects (percentage of motile sperm, concentration and percentage of abnormal sperm).One male and one female in the 0.3% group and two control males died. A cause of death was not reported. No treatment-related clinical signs were observed. Body weights at week 13 in the high dose males and females were comparable to control (data for other groups not reported; only means reported for control and high-dose group without SD). Food intake was reportedly not affected by treatment. During the continuous breeding phase, no significant differences in the number of fertile pairs, litters per pair, live pups per litter, proportion of pups born alive, or live pup weights were observed in the 0.03 and 0.3% treated groups compared with control. In the 1.0% treated group, significant decreases in the number of fertile pairs (75% compared to 100% in control), litters/pair (1.8 compared to 4.85 in control), the number of live pups/litter (1.72 compared to 12.08 in control), and the proportion of pups born alive (0.5 compared to 1.00 in control) were observed. There were no significant differences in live pup weight. The crossover mating trial conducted with males and females from the 1.0% treated group and controls, no significant difference in libido (number of copulatory plugs) was seen between the groups. Treated males that were paired with control females showed no significant differences in the number of fertile pairs, live pups per litter, proportion of pups born alive, or live pup weight. Treated females that were paired with control males had a significantly decreased number of fertile pairs (4/19 compared to 14/19 in control), live pups per litter (0.75 compared to 7.71 in control), proportion of pups born alive (0.63 compared to 0.95 in control), and live pup weight (1.41 compared to 1.83 in control). At necropsy, body weights of males were significantly decreased (8%) compared with controls. No significant decrease in female terminal body weights were seen compared with control. In females, absolute liver weights were significantly increased in females (17%) and uterus weight was significantly decreased (28%) compared with control. No significant differences in liver weight were seen in males. Absolute weighs of rain, pituitary, testes, epididymis, prostate, seminal vesicles, and ovary with oviducts weights were not significantly different from control. There were no remarkable gross or histopathology findings in male or female reproductive organs (data not quantified). There were no significant differences in the percentage of motile sperm, sperm concentration, or the percentage of abnormal sperm. No author-reported NOAEL/LOAEL values were reported. Based on the data provided, a NOAEL of 0.3% and a LOAEL of 1.0% were determined based on the decreased number of fertile pairs, litters/pair, the number of live pups/litter, and the proportion of pups born alive.

[3] 61566: In a continuous breeding study, CD-1 albino mice (40/sex in the control group and 20/sex/treatment group) were administered di-n-butyl phthalate (DBP; 99% purity) in the diet at concentrations of 0, 0.03, 0.3, and 1.0%. 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, pituitary gland, and brain [females only]), histopathology on reproductive organs (testis, epididymis, prostate, seminal vesicles, ovary, oviduct, uterus, and vagina), and sperm effects (percentage of motile sperm, concentration and percentage of abnormal sperm).One male and one female in the 0.3% group and two control males died. A cause of death was not reported. No treatment-related clinical signs were observed. Body weights at week 13 in the high dose males and females were comparable to control (data for other groups not reported; only means reported for control and high-dose group without SD). Food intake was reportedly not affected by treatment. During the continuous breeding phase, no significant differences in the number of fertile pairs, litters per pair, live pups per litter, proportion of pups born alive, or live pup weights were observed in the 0.03 and 0.3% treated groups compared with control. In the 1.0% treated group, significant decreases in the number of fertile pairs (75% compared to 100% in control), litters/pair (1.8 compared to 4.85 in control), the number of live pups/litter (1.72 compared to 12.08 in control), and the proportion of pups born alive (0.5 compared to 1.00 in control) were observed. There were no significant differences in live pup weight. The crossover mating trial conducted with males and females from the 1.0% treated group and controls, no significant difference in libido (number of copulatory plugs) was seen between the groups. Treated males that were paired with control females showed no significant differences in the number of fertile pairs, live pups per litter, proportion of pups born alive, or live pup weight. Treated females that were paired with control males had a significantly decreased number of fertile pairs (4/19 compared to 14/19 in control), live pups per litter (0.75 compared to 7.71 in control), proportion of pups born alive (0.63 compared to 0.95 in control), and live pup weight (1.41 compared to 1.83 in control). At necropsy, body weights of males were significantly decreased (8%) compared with controls. No significant decrease in female terminal body weights were seen compared with control. In females, absolute liver weights were significantly increased in females (17%) and uterus weight was significantly decreased (28%) compared with control. No significant differences in liver weight were seen in males. Absolute weighs of rain, pituitary, testes, epididymis, prostate, seminal vesicles, and ovary with oviducts weights were not significantly different from control. There were no remarkable gross or histopathology findings in male or female reproductive organs (data not quantified). There were no significant differences in the percentage of motile sperm, sperm concentration, or the percentage of abnormal sperm. No author-reported NOAEL/LOAEL values were reported. Based on the data provided, a NOAEL of 0.3% and a LOAEL of 1.0% were determined based on the decreased number of fertile pairs, litters/pair, the number of live pups/litter, and the proportion of pups born alive.

[4] 61566: In a continuous breeding study, CD-1 albino mice (40/sex in the control group and 20/sex/treatment group) were administered di-n-butyl phthalate (DBP; 99% purity) in the diet at concentrations of 0, 0.03, 0.3, and 1.0%. 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, pituitary gland, and brain [females only]), histopathology on reproductive organs (testis, epididymis, prostate, seminal vesicles, ovary, oviduct, uterus, and vagina), and sperm effects (percentage of motile sperm, concentration and percentage of abnormal sperm).One male and one female in the 0.3% group and two control males died. A cause of death was not reported. No treatment-related clinical signs were observed. Body weights at week 13 in the

high dose males and females were comparable to control (data for other groups not reported; only means reported for control and high-dose group without SD). Food intake was reportedly not affected by treatment. During the continuous breeding phase, no significant differences in the number of fertile pairs, litters per pair, live pups per litter, proportion of pups born alive, or live pup weights were observed in the 0.03 and 0.3% treated groups compared with control. In the 1.0% treated group, significant decreases in the number of fertile pairs (75% compared to 100% in control), litters/pair (1.8 compared to 4.85 in control), the number of live pups/litter (1.72 compared to 12.08 in control), and the proportion of pups born alive (0.5 compared to 1.00 in control) were observed. There were no significant differences in live pup weight. The crossover mating trial conducted with males and females from the 1.0% treated group and controls, no significant difference in libido (number of copulatory plugs) was seen between the groups. Treated males that were paired with control females showed no significant differences in the number of fertile pairs, live pups per litter, proportion of pups born alive, or live pup weight. Treated females that were paired with control males had a significantly decreased number of fertile pairs (4/19 compared to 14/19 in control), live pups per litter (0.75 compared to 7.71 in control), proportion of pups born alive (0.63 compared to 0.95 in control), and live pup weight (1.41 compared to 1.83 in control). At necropsy, body weights of males were significantly decreased (8%) compared with controls. No significant decrease in female terminal body weights were seen compared with control. In females, absolute liver weights were significantly increased in females (17%) and uterus weight was significantly decreased (28%) compared with control. No significant differences in liver weight were seen in males. Absolute weighs of rain, pituitary, testes, epididymis, prostate, seminal vesicles, and ovary with oviducts weights were not significantly different from control. There were no remarkable gross or histopathology findings in male or female reproductive organs (data not quantified). There were no significant differences in the percentage of motile sperm, sperm concentration, or the percentage of abnormal sperm. No author-reported NOAEL/LOAEL values were reported. Based on the data provided, a NOAEL of 0.3% and a LOAEL of 1.0% were determined based on the decreased number of fertile pairs, litters/pair, the number of live pups/litter, and the proportion of pups born alive.

[5] 676278: Time weighted averages were calculated by this reviewer as: 0, 2.5, 23.4, 236.4, and 1137.5 mg/kg/day throughout the exposure period based on reported daily intake.In a developmental toxicity study, pregnant CD (SD)IGS rats (6-8/group) were provided a soy-free diet that contained di-n-butyl phthalate (DBP) at 0, 20, 200, 2000 or 10000 ppm from gestation day (GD) 15 until post-natal day (PND) 21. The study calculated daily intake for each group at different time points as: GD 15- GD 20: 0, 1.5, 14.4, 148.2, 712.3 mg/kg/day; PND2- PND10: 0, 2.4, 22.7, 223.6, 1108.5 mg/kg/day; and PND 10-PND21: 0, 3.0, 28.5, 290.9, 1371.8 mg/kg/day, at 0, 20, 200, 2000, and 10000 ppm groups, respectively. Time weighted averages were calculated by this reviewer as: 0, 2.5, 23.4, 236.4, and 1137.5 mg/kg/day throughout the exposure period. Body weight and food intake of dams were assessed on GDs 15 and 20 and PNDs 2, 10, and 21. On PND 2, the number of pups, weights and anogenital distance were measured. On PND 2 absolute anogenital distance (AGD) of male and female pups was recorded. On PND 3 each litter was culled to 4 males and 4 females where possible. Body weights of pups were recorded once a week until PND 21 (weaning). Male pups were inspected for presence of and number of nipples/areolae on PND 14. On PND 21, offspring were weaned, and dosing was terminated; diet was changed to a regular rodent diet (CRF-1). Necropsy was performed on 8-10 males and females/group (at least 1/litter) on PND 21 (prepubertal), postnatal week (PNW) 11 and PNW 20; male pups in the 1137.5 mg/kg/day group were not evaluated at PNW 20 due to decreased number that were born. All female pups were monitored daily for vaginal opening (from PND 27 onward) and all male pups monitored for preputial separation (from PND 35 onward). Estrous cycle was monitored daily via vaginal smears during PNW 8-11 and PNW 17-20 for at least 21 days. Sacrificing of female offspring on PNW 11 and PNW 20 was delayed up to 4 days until animals entered diestrus. At the three scheduled necropsies the following organs were weighed: brain, liver, kidneys, adrenals, testes, epididymides, ovaries and uterus; in addition, pituitary, ventral lobe of the prostate and seminal vesicles were weight at PNW 11 and PNW 20. Histopathology was performed on the following tissues: brain, pituitary, thyroid glands, liver, kidneys, adrenals, testes, epididymides, prostate, seminal vesicles, ovaries, uterus, vagina, and mammary glands. Immunohistochemistry was performed on the pituitary gland on offspring sacrificed on PND 21 and PNW 11 for luteinizing hormone (LH), follicle-stimulating hormone (FSH), and prolactin. From GD 15-20, maternal body weight gains were significantly decreased (18 and 21%) at 2.5 and 1137.5 mg/kg/day group, respectively, compared to control. No other changes in body weights were seen during treatment. Food consumption was not different at any time point compared to control. Duration of pregnancy was similar between the groups. Although there was no significant difference in the number of live offspring, the male ratio at birth was significantly reduced at 236.4 mg/kg/day (43.9% male) and 1137.5 mg/kg/day (24.7 % male), compared to control, which tended to be high (65.6%). AGD measured on PND2 was reduced in males 19% in the 1137.5 mg/kg/day group compared to control. AGD was unaffected in females and no effects on pup body weight were observed on PND 2. On PND 14, retention of nipples/areolae in males was seen in (0, 4%, 13%, 15% and 100%) of males at 0, 2.5, 23.4, 236.4, and 1137.5 mg/kg/day, respectively; statistical significance was seen at 1137.5 mg/kg/day. There were no dose-related change in the onset of puberty in males and females. No significant differences in estrous cyclicity were seen between the groups from PNW 8-11 and PNW 17-20. On PND 21, no significant difference in body weights were seen in male or female offspring compared to control, although body weight at 1137.5 mg/kg/day tended to be lower in both sexes (~12%). Significant increase in relative liver weights were seen in males (29%) and females (27%), relative brain of males (12%), and a significant decrease in relative testes weight (19%) were seen at 1137.5 mg/kg/day compared to control. Absolute testes weights were also decreased at 2.5 and 1137.5 mg/kg/day compared to control (data not shown). No other organ weights were significantly different from control (absolute weights not shown). On PND 21, incidence of males with reduced spermatocyte development (decreased number of spermatocytes in the seminiferous tubules) was significantly increased in all treatment groups with severity increasing in a dose-related manner (incidence: 0/8, 4/8, 4/8, 8/8, 8/8 at 2.5, 23.4, 236.4, and 1137.5 mg/kg/day, respectively). Also in the testis, incidence of aggregated foci of Leydig cells was significantly increased (8/8 and 8/8 males) at 236.4 and 1137.5 mg/kg/day, respectively (compared to 0/8 in control). In the epididymides, decreased ductular cross sections of the epididymal duct occurred (indicating reduced coiling) in 5/8 and 7/8 males at 236.6 and 1137.5 mg/kg/day, respectively (compared to 0/8 controls). Liver hypertrophy associated with increased eosinophilia of the cytoplasm was seen in 8/8 males and 8/8 females in the 1137.5 mg/kg/day group, compared to 0/8 in all other groups including control. In the mammary glands of females, incidence of hypoplasia of alveolar bud was significantly increased at 2.5, 236.4 and 1137.5 mg/kg/day and increased in severity in a dose-related manner (incidence: 0/8, 4/8, 3/8, 4/8 and 4/4 at 0, 2.5, 23.4, 236.4, and 1137.5 mg/kg/day, respectively). No other histological changes were noted. In the anterior pituitary of males at PND 21, there was a significant decrease in percentage of FSH-positive cell (~1.5%) and prolactin-positive cells (~3%),and increase percentage of LH-positive cells (~3%) at 1137.5 mg/kg/day compared to control. In the anterior pituitary of females at PND 21, significant decreases in the percentage of FSH-positive cells were observed (~3%, ~2.5%, and ~1.5% at 23.4, 236.4, and 1137.5 mg/kg/day, respectively), percentage of prolactin-positive cells (~2%) at 1137.5 mg/kg/day, and a significant increase in percentage of LH-positive cells (~3% and ~4% at 236.4, and 1137.5 mg/kg/day, respectively). At PNW 11 necropsy, no significant difference in body weights were seen in either sex compared to control. Relative kidney weight in males (but not females) was significantly decreased (12%) at 1371.8 mg/kg/day compared to control. Relative pituitary weights were significantly increased in males (16%, 19% and 22%) at 2.5, 23.4, 236.4 mg/kg/day, respectively, and significantly decreased in females (36%) at 1137.5 mg/kg/day compared to control. Absolute pituitary weight was also increased in males at 23.4 and 236.4 mg/kg/day, and females at 1137.5 mg/kg/day compared to control (data not shown). Significant increase in both absolute (data not shown) and relative ventral prostate weights were seen at 23.4 mg/kg/day (42%), compared to control. At PNW 11, incidence of males with loss of germ cell development was significantly increased (4/8 and 9/10) at 236.4 and 1137.5 mg/kg/day, respectively; incidence in control was 0/8. In the ventral prostate, flattening of surface epithelia was seen with significant incidence at 2.5 mg/kg/day (6/8 males) and 1137.5 mg/kg/day (9/10 males) compared to 2/8 in controls. In the mammary gland of males, incidences of vacuolar degeneration of alveolar cells were significantly increased in all dosed groups (incidence: 1/8, 8/8, 6/8, 8/8, 9/10 at 0, 2.5, 23.4, 236.4, and 1137.5 mg/kg/day, respectively), as well as alveolar atrophy at 2.5 mg/kg/day (6/8), 236.4 mg/kg/day (6/8), and 1137.5 mg/kg/day (5/10) compared to control (0/8). The average size of mammary alveolar buds in males at PNW 11 were significantly decreased (~23%, 12%, 12%, and 26%) at 2.5, 23.4, 236.4, and 1137.5 mg/kg/day, respectively, compared to control. No other statistically significant histological changes were noted in males. In females, pituitaries were small in 6/8 animals at 1137.5 mg/kg/day, compared to 0/8 in the control group. In the anterior pituitary at PNW 11, there was a significant increase in the percentage of FSH-positive (~1.5%) in males, and (~2%) in females at 1137.5 mg/kg/day compared to control. There we no males evaluated at PNW 20 in the 1137.5 mg/kg/day group due to the decreased number of males born. At PNW 20, no significant difference in body weights were seen in either sex. In males, no significant difference in absolute (not shown) or relative organ weights were seen. In females, significant increases in absolute weight of the kidneys at 23.4 and 236.4 mg/kg/day and adrenals at 236.4 mg/kg/day were observed (data not shown). Also in females, significant decreases in relative pituitary weight (16%, 16%, 23%) were seen at 23.4, 236.4 and 1137.5 mg/kg/day and absolute pituitary weight at 1137.5 mg/kg/day (data not shown). In the mammary gland of males, increased incidence of alveolar atrophy was seen at 23.4 mg/kg/day (8/8) and 236.4 mg/kg/day (8/10) compared to 1/10 controls; and increased incidence of alveolar vacuolar degeneration at 23.4 mg/kg/day (6/8) compared to control (2/10). No other histological changes were

noted in males. No histological changes were seen in females at PNW 20.Study authors identified a LOAEL of 2.5 mg/kg/day (no NOAEL identified) based on testicular pathology and mammary gland toxicity in males and developmental effects in females consistent with a disruption of pituitary function.

[6] 674382: Pregnant Sprague-Dawley rats (5 in control group; 7 in all other groups) were administered 0.1, 1.0, 10, 50, 100, or 500 mg/kg/day of di (n-butyl) phthalate (DBP) in corn oil via gavage from gestation day (GD) 12-19. Body weight of dams were evaluated daily from GD 4 throughout the dosing period. Dams were sacrificed on GD 19. Fetuses were sexed by internal examination of reproductive organs. The right and left testes and epididymides were removed and snap frozen. Intratesticular testosterone was measured (from 3-4 individual fetuses from 1-4 litters per dose group) via radioimmunoassay. Fetal testicular lipid content was measured by staining tissue sections with oil red O (4-5 fetuses from different dams/group). Gene and protein expression of key genes and proteins involved in cholesterol transport and steroidogenesis were examined via RT-PCR, Western Blot and immunohistochemistry on testis. The study was repeated a second time and included 30 mg/kg/day group in addition to the other treatment groups; however, the 30 mg/kg/day group was only used for testicular testosterone level evaluation.Body weight of dams were not reported. Intratesticular testosterone was significantly decreased (~20%, 30% and 95%) at 50, 100, and 1000 mg/kg/day, respectively, compared to control. Fetal testicular lipid content was significantly reduced (~45%) at 1000 mg/kg/day compared to control. A significant dose-related decrease in mRNA and protein concentration of genes and proteins involved in cholesterol transport and steroidogenesis (scavenger receptor, steroidogenic acute regulatory protein (StAR), cytochrome P450 side-chain cleavage, 3b-hydroxysteroid dehydrogenase, and cytochrome P450c17) were seen in exposed fetuses. The study authors determined a LOAEL of 50 mg/kg/day and a NOAEL of 10 mg/kg/day based on reduction of genes and proteins associated with testosterone production together with the reduction in intratesticular testosterone.

[7] 674382: Pregnant Sprague-Dawley rats (5 in control group; 7 in all other groups) were administered 0.1, 1.0, 10, 50, 100, or 500 mg/kg/day of di (n-butyl) phthalate (DBP) in corn oil via gavage from gestation day (GD) 12-19. Body weight of dams were evaluated daily from GD 4 throughout the dosing period. Dams were sacrificed on GD 19. Fetuses were sexed by internal examination of reproductive organs. The right and left testes and epididymides were removed and snap frozen. Intratesticular testosterone was measured (from 3-4 individual fetuses from 1-4 litters per dose group) via radioimmunoassay. Fetal testicular lipid content was measured by staining tissue sections with oil red O (4-5 fetuses from different dams/group). Gene and protein expression of key genes and proteins involved in cholesterol transport and steroidogenesis were examined via RT-PCR, Western Blot and immunohistochemistry on testis. The study was repeated a second time and included 30 mg/kg/day group in addition to the other treatment groups; however, the 30 mg/kg/day group was only used for testicular testosterone level evaluation.Body weight of dams were not reported. Intratesticular testosterone was significantly decreased (~20%, 30% and 95%) at 50, 100, and 1000 mg/kg/day, respectively, compared to control. Fetal testicular lipid content was significantly reduced (~45%) at 1000 mg/kg/day compared to control. A significant dose-related decrease in mRNA and protein concentration of genes and proteins involved in cholesterol transport and steroidogenesis (scavenger receptor, steroidogenic acute regulatory protein (StAR), cytochrome P450 side-chain cleavage, 3b-hydroxysteroid dehydrogenase, and cytochrome P450c17) were seen in exposed fetuses. The study authors determined a LOAEL of 50 mg/kg/day and a NOAEL of 10 mg/kg/day based on reduction of genes and proteins associated with testosterone production together with the reduction in intratesticular testosterone.

[8] 680063: 3.DBP Supp study in utero in rats. In a supplemental in-utero exposure study as part of a group of NTP studies on phthalates, one male was paired with two female F344/N rats (5 breeding pairs). Once pregnancy was confirmed, pregnant females (presumably 10/treatment group; it is unclear if the control group contained 15 or 30 animals) received feed containing 0, 1,250, 2,500, 5,000, 7,500, 10,000, or 20,000 ppm of Dibutyl phthalate (DBP) 7 days/week for up to 20 days during the gestation period. Animals were observed daily during breeding and twice daily during gestation; observations were recorded as necessary. Between GD17 and 20, the terminal body weights of the dams were recorded, the number of fetuses/breeding was recorded, and maternal livers and pooled fetal livers were collected and weighed. Peroxisomal palmitoyl-CoA oxidase activity was measured in the maternal and pooled fetal livers. No recorded clinical observations were mentioned for any of the study groups. Terminal body weights of dams were similar between the control group and groups exposed to $\leq$10,000 ppm. However, terminal body weights of dams in the 20,000 ppm group were significantly reduced by 12%, compared to controls. Maternal absolute liver weights were statistically significantly increased (by 10%) in the 10,000 ppm group only. Relative liver weights were not reported. Palmitoyl-CoA oxidase activity in dams was increased (160-240%) as compared to the control group at 1,250, 2,500, 5,000 ppm, however, this increase does appear to be dose-related. The number of fetuses per breeding was similar between the control and most DBP-treated groups, however, the number of fetuses recovered from the 20,000 ppm group was significantly reduced (58%) as compared to the control group. Fetal liver weights only differed from the control group at 20,000 ppm, in which weights were significantly decreased by 74%. There were no treatment-related changes in palmitoyl-CoA oxidase activity in fetal livers. No author-reported toxicity values were provided. Based on the data presented in the study, a NOAEL of 10,000 ppm and a LOAEL of 20,000 ppm was identified based on significant decreases in dam body weights, in the number of fetuses per breeding group, and in fetal liver weights. It is unclear if fetal effects were secondary to the decrease in maternal body weights.

[9] 680063: 3.DBP Supp study in utero in rats. In a supplemental in-utero exposure study as part of a group of NTP studies on phthalates, one male was paired with two female F344/N rats (5 breeding pairs). Once pregnancy was confirmed, pregnant females (presumably 10/treatment group; it is unclear if the control group contained 15 or 30 animals) received feed containing 0, 1,250, 2,500, 5,000, 7,500, 10,000, or 20,000 ppm of Dibutyl phthalate (DBP) 7 days/week for up to 20 days during the gestation period. Animals were observed daily during breeding and twice daily during gestation; observations were recorded as necessary. Between GD17 and 20, the terminal body weights of the dams were recorded, the number of fetuses/breeding was recorded, and maternal livers and pooled fetal livers were collected and weighed. Peroxisomal palmitoyl-CoA oxidase activity was measured in the maternal and pooled fetal livers. No recorded clinical observations were mentioned for any of the study groups. Terminal body weights of dams were similar between the control group and groups exposed to $\leq$10,000 ppm. However, terminal body weights of dams in the 20,000 ppm group were significantly reduced by 12%, compared to controls. Maternal absolute liver weights were statistically significantly increased (by 10%) in the 10,000 ppm group only. Relative liver weights were not reported. Palmitoyl-CoA oxidase activity in dams was increased (160-240%) as compared to the control group at 1,250, 2,500, 5,000 ppm, however, this increase does appear to be dose-related. The number of fetuses per breeding was similar between the control and most DBP-treated groups, however, the number of fetuses recovered from the 20,000 ppm group was significantly reduced (58%) as compared to the control group. Fetal liver weights only differed from the control group at 20,000 ppm, in which weights were significantly decreased by 74%. There were no treatment-related changes in palmitoyl-CoA oxidase activity in fetal livers. No author-reported toxicity values were provided. Based on the data presented in the study, a NOAEL of 10,000 ppm and a LOAEL of 20,000 ppm was identified based on significant decreases in dam body weights, in the number of fetuses per breeding group, and in fetal liver weights. It is unclear if fetal effects were secondary to the decrease in maternal body weights.

[10] 680063: 4.DBP Supp study lactational in rats. In a supplemental lactational exposure study, F344/N dams (12 dams per treatment group) received feed containing 0, 300, 1,000, 3,000, 10,000, or 30,000 ppm of Dibutyl phthalate (DBP; purity >98%). Dams were exposed 7 days/week on Days 1 through 22 of lactation. The number of control animals is not clear. The study indicated 120 females were maintained on an un-dosed control diet. It later states that 6 dams and their litters served as controls, and then that a total of 24 control dams and litters were evaluated (data were reported on 18 control animals). Animals were observed daily during breeding, twice daily during gestation, and weekly thereafter during lactation; observations were recorded as necessary. The litter weights were recorded on lactation Day 0. On Day 4 of lactation, the litters were culled to a maximum of 8 pups/litter. The individual body weights of pups were recorded on Days 7, 14, and 21 of lactation. On these same days, one male and one female pup per litter from 6 dams/group were assessed for absolute liver weights and peroxisomal palmitoyl-CoA oxidase activity. On Day 22 of lactation, terminal body weights, absolute liver weights, and peroxisomal palmitoyl-CoA oxidase activity were measured for 6 dams/group. No recorded clinical observations were mentioned for any of the study groups. Terminal body weights of dams in the 30,000 ppm group were significantly decreased (17%), compared to the controls. Absolute liver weights of dams in the 10,000 ppm and 30,000 ppm groups were significantly increased by 12% relative to the control group. Relative livers weights were not reported. Peroxisomal palmitoyl-CoA oxidase activity was largely similar between the control and treated groups, with the exception of the 3,000 ppm group in which activity was increased by 67% compared to controls. Pup body weights were significantly decreased at 30,000 ppm on LD7, 14, and 21 among both male (40-44% decrease relative to controls) and female (38-44% decrease) pups. Absolute liver weights were significantly decreased at 30,000 ppm on LD7, 14, and 21 among both male (31-59%) and female (44-51%)

pups. No significant liver weight changes were observed in other groups. There were statistically significant changes in palmitoyl-CoA oxidase activity in both male and female pups (e.g., a decrease in mid-dose pups, yet an increase in high-dose pups), however, these changes were likely not treatment-related. No author-reported toxicity values were provided. Based on the data presented in the study a NOAEL of 10,000 ppm and a LOAEL of 30,000 ppm was identified based on statistically and biologically significant decreases in dam body weight, increases in dam absolute liver weight, decreases in pup body weight (males and females), and decreases in pup absolute liver weight (males and females).

[11] 680063: 4.DBP Supp study lactational in rats. In a supplemental lactational exposure study, F344/N dams (12 dams per treatment group) received feed containing 0, 300, 1,000, 3,000, 10,000, or 30,000 ppm of Dibutyl phthalate (DBP; purity >98%). Dams were exposed 7 days/week on Days 1 through 22 of lactation. The number of control animals is not clear. The study indicated 120 females were maintained on an un-dosed control diet. It later states that 6 dams and their litters served as controls, and then that a total of 24 control dams and litters were evaluated (data were reported on 18 control animals). Animals were observed daily during breeding, twice daily during gestation, and weekly thereafter during lactation; observations were recorded as necessary. The litter weights were recorded on lactation Day 0. On Day 4 of lactation, the litters were culled to a maximum of 8 pups/litter. The individual body weights of pups were recorded on Days 7, 14, and 21 of lactation. On these same days, one male and one female pup per litter from 6 dams/group were assessed for absolute liver weights and peroxisomal palmitoyl-CoA oxidase activity. On Day 22 of lactation, terminal body weights, absolute liver weights, and peroxisomal palmitoyl-CoA oxidase activity were measured for 6 dams/group. No recorded clinical observations were mentioned for any of the study groups. Terminal body weights of dams in the 30,000 ppm group were significantly decreased (17%), compared to the controls. Absolute liver weights of dams in the 10,000 ppm and 30,000 ppm groups were significantly increased by 12% relative to the control group. Relative livers weights were not reported. Peroxisomal palmitoyl-CoA oxidase activity was largely similar between the control and treated groups, with the exception of the 3,000 ppm group in which activity was increased by 67% compared to controls. Pup body weights were significantly decreased at 30,000 ppm on LD7, 14, and 21 among both male (40-44% decrease relative to controls) and female (38-44% decrease) pups. Absolute liver weights were significantly decreased at 30,000 ppm on LD7, 14, and 21 among both male (31-59%) and female (44-51%) pups. No significant liver weight changes were observed in other groups. There were statistically significant changes in palmitoyl-CoA oxidase activity in both male and female pups (e.g., a decrease in mid-dose pups, yet an increase in high-dose pups), however, these changes were likely not treatment-related. No author-reported toxicity values were provided. Based on the data presented in the study a NOAEL of 10,000 ppm and a LOAEL of 30,000 ppm was identified based on statistically and biologically significant decreases in dam body weight, increases in dam absolute liver weight, decreases in pup body weight (males and females), and decreases in pup absolute liver weight (males and females).

[12] 680063: 5.DBP MPE Determination study in rats. In a maximum perinatal exposure (MPE) determination study as part of a group of NTP studies on phthalates, pregnant females (18-19/group) received feed containing 1,250, 2,500, 5,000, 7,500, 10,000, or 20,000 ppm of Dibutyl phthalate (DBP) for 7 days/week from the time pregnancy was confirmed (gestation day 0 (GD 0) throughout gestation and lactation. The control group, which received un-dosed feed, consisted of 30 pregnant females. The authors did not report doses in mg/kg-day or provide food consumption data for dams. Pups were weaned on day 28 post-partum and selected pups (up to 10 per group) were placed on the same DBP or control diet as their respective dams for 4 weeks. Mean doses based on male offspring body weights and food consumption were reported to be 0, 143, 284, 579, 879, and 1,165 mg/kg-day. Mean doses based on female offspring body weights and food consumption were reported to be 0, 133, 275, 500, 836, and 1,104 mg/kg-day. Dams were observed twice daily during gestation and lactation and observations were recorded "as necessary;" dams were also monitored for mortality. Dam body weights were recorded on GD 0 and 18 and weekly starting on lactation day (LD) 0. Total dam weight gain during gestation (GDs 0-18) and lactation (LDs 0-28) were calculated. Dam feed consumption was measured on GDs 7, 14, and 21 and weekly during lactation. The gestation index (females that delivered at least one live pup/sperm-positive females) and mean gestation length were recorded for each treatment group. Uteri of females exposed to 20,000 ppm in feed that did not litter were examined for implantation sites.Developmental endpoints included the sex and number of pups per litter, litter weights (PNDs 0 & 1), number and percent of live pups per litter (PND 0, 1, 4, 7, 14, 21, and 28), and pup body weights (PNDs 0, 1, 4, 7, and weekly thereafter). On day 4 post-partum, the litters were randomly culled to a maximum of eight rats/litter. One rat of each sex from each litter was sacrificed at weaning for necropsy. During the post-weaning period, F1 offspring were observed twice daily, any mortality was noted and observations were recorded on a weekly basis. Offspring body weights and feed consumption were measured weekly. The change in F1 body weights from week 1 to week 4 on their respective diets and the final body weights relative to controls (%) were calculated. The time elapsed between the end of the 4-week feeding period and sacrifice was not specified. At sacrifice, F1 animals were necropsied and terminal body weights were recorded. Liver, right testis, right kidney, thymus, heart, and lungs were weighed. Histologic examinations were performed on >30 organs/tissues from all F1 offspring in the control and 10,000 ppm group. In addition, histologic examinations were performed on gross lesions of rats in the lower exposure groups (143, 284, 579, and 879 mg/kg-day for F1 males and 133, 275, 500, and 836 mg/kg-day for F1 females) and on the epididymis of all male offspring in the 284, 579, and 879 mg/kg-day groups. All dams survived until the pups were weaned. No clinical signs observed in dams (during gestation or lactation) were considered to be treatment related. On GD 18, there was a significant and biologically relevant decrease in dam body weight in the 20,000 ppm group (decreased 10% compared to controls) which coincided with a 36% decrease in weight gain in the same group. Body weights were significantly increased at 10,000 ppm on GD 18 and LD 0, although the magnitude of these increases was small at ~5%. The study also reports a significant reduction in dam weight gain in the 10,000 ppm group during lactation (LD 0-28); however, this is due to the significantly higher body weights in these animals on LD 0. Dam feed consumption during gestation or lactation were not reported by the authors. The gestation index was significantly decreased in the 5,000 ppm (27% decreased) and 20,000 ppm (77% decreased) groups, but not in the 7,500 or 10,000 ppm groups. Only the 5,000 ppm group exhibited a significantly decreased gestation length (2% decrease) as compared to the control group. No results were provided for the number of implantation sites observed in the uteri of female rats exposed to DBP that did not litter. At birth, the number of pups per litter and number of live pups per litter were drastically and significantly reduced by 72% and 71%, respectively, in the 20,000 ppm group. By PND 1, all pups in the 20,000 ppm group died. The percentage of live pups per litter was also significantly reduced in the 10,000 ppm group on PND 1 (6%) and PND 4 (7%) prior to culling. The number of rats/sex/litter and litter weights (PND 0 & 1) were not reported by the study authors. Birth weights were significantly decreased at ≥7,500 ppm in feed and on PNDs 1, 4, 7, and 14, pup body weights were decreased at ≥5,000 ppm in feed. On PNDs 21 and 28, pup body weights were statistically significantly reduced in dose-related manner at ≥2,500 ppm in feed; however, the changes were small (<5% decrease relative to controls) in the 2,500 ppm group. At 5,000 ppm in feed, pup weights were decreased >5%, relative to controls, on PND 28. No lesions were revealed during the necropsy of one male and one female pup per litter sacrificed at weaning.No mortality or clinical signs related to treatment were observed in F1 offspring post-weaning. Although offspring body weights were measured weekly, only body weights on weeks 1 and 4 of treatment were reported. F1 male body weights were significantly decreased by 4-14% at ≥579 mg/kg-day at both time points, although the change was not clearly dose related. F1 female body weights were decreased by 14% at 836 mg/kg-day and by 12% at 1,104 mg/kg-day on week 1. Body weight gains were significantly reduced in F1 males (11-13%) at 879 and 1,165 mg/kg-day, and in females only in the 133 and 500 mg/kg-day groups. Average feed consumption of F1 offspring was not altered with treatment. F1 necropsy weights were significantly higher than the weights recorded after 28 days on feed, suggesting some time elapsed prior to sacrifice. F1 male necropsy weights were 5%, 9%, and 5% lower than controls at 579, 879, and 1,165 mg/kg-day, and these changes were statistically, but not biologically significant. There were no treatment related changes in female necropsy body weights. Notable statistically significant organ weight changes included dose-related increases in absolute (23-41%) and relative (8-49%) liver weights at ≥579 and ≥143 mg/kg-day, respectively, in F1 males, and increases in absolute (6-21%) and relative (6-27%) liver weights in F1 females at ≥275 mg/kg-day. Although statistically significant, the magnitudes of change at 143 mg/kg-day in F1 males were small (<10%). F1 males also showed slight but significant reductions in absolute and relative testis weights at ≥879 mg/kg-day and at 1,165 mg/kg-day, respectively, which was associated with histopathological changes. Changes in kidney weights were observed in both sexes, but were not clearly dose related. In males, relative, but not absolute kidney weights were significantly increased ≥10%, relative to controls, at ≥579 mg/kg-day. Kidney weight changes in females were all small in magnitude (<10%) or not dose-responsive. Other organ weight changes were likely not treatment related and included increases in relative, but not absolute thymus weights at ≥879 mg/kg-day in males, and a sporadic increase in relative heart and lung weights in 879 mg/kg-day males and 836 mg/kg-day females, respectively. No gross lesions were observed at necropsy in male or female pups after 4 weeks of exposure. From histologic examination, all male rats in the 879 and 1,165 mg/kg-day groups

exhibited mild to marked hypospermia of the epididymis. Four of the ten males in the 579 mg/kg-day group displayed mild hypospermia of the epididymis. There were no differences in germ cell production or maturation. The authors selected 1,165 mg/kg-day for males and 1,104 mg/kg-day for females as the maximum perinatal exposure levels to be used in follow-up developmental studies. Based on the data presented in the study, a NOAEL of 143 mg/kg-day and a LOAEL of 284 mg/kg-day was identified based on both statistically and biologically significant increases in relative liver weights in F1 males exposed in utero, during lactation, and in feed for 4 weeks.Litter effects, notably reductions in pup body weights, were observed when dams were administered ≥5,000 ppm in feed.

[13] 680063: 5.DBP MPE Determination study in rats. In a maximum perinatal exposure (MPE) determination study as part of a group of NTP studies on phthalates, pregnant females (18-19/group) received feed containing 1,250, 2,500, 5,000, 7,500, 10,000, or 20,000 ppm of Dibutyl phthalate (DBP) for 7 days/week from the time pregnancy was confirmed (gestation day 0 (GD 0) throughout gestation and lactation. The control group, which received un-dosed feed, consisted of 30 pregnant females. The authors did not report doses in mg/kg-day or provide food consumption data for dams. Pups were weaned on day 28 post-partum and selected pups (up to 10 per group) were placed on the same DBP or control diet as their respective dams for 4 weeks. Mean doses based on male offspring body weights and food consumption were reported to be 0, 143, 284, 579, 879, and 1,165 mg/kg-day. Mean doses based on female offspring body weights and food consumption were reported to be 0, 133, 275, 500, 836, and 1,104 mg/kg-day. Dams were observed twice daily during gestation and lactation and observations were recorded "as necessary;" dams were also monitored for mortality. Dam body weights were recorded on GD 0 and 18 and weekly starting on lactation day (LD) 0. Total dam weight gain during gestation (GDs 0-18) and lactation (LDs 0-28) were calculated. Dam feed consumption was measured on GDs 7, 14, and 21 and weekly during lactation. The gestation index (females that delivered at least one live pup/sperm-positive females) and mean gestation length were recorded for each treatment group. Uteri of females exposed to 20,000 ppm in feed that did not litter were examined for implantation sites.Developmental endpoints included the sex and number of pups per litter, litter weights (PNDs 0 & 1), number and percent of live pups per litter (PND 0, 1, 4, 7, 14, 21, and 28), and pup body weights (PNDs 0, 1, 4, 7, and weekly thereafter). On day 4 post-partum, the litters were randomly culled to a maximum of eight rats/litter. One rat of each sex from each litter was sacrificed at weaning for necropsy. During the post-weaning period, F1 offspring were observed twice daily, any mortality was noted and observations were recorded on a weekly basis. Offspring body weights and feed consumption were measured weekly. The change in F1 body weights from week 1 to week 4 on their respective diets and the final body weights relative to controls (%) were calculated. The time elapsed between the end of the 4-week feeding period and sacrifice was not specified. At sacrifice, F1 animals were necropsied and terminal body weights were recorded. Liver, right testis, right kidney, thymus, heart, and lungs were weighed. Histologic examinations were performed on >30 organs/tissues from all F1 offspring in the control and 10,000 ppm group. In addition, histologic examinations were performed on gross lesions of rats in the lower exposure groups (143, 284, 579, and 879 mg/kg-day for F1 males and 133, 275, 500, and 836 mg/kg-day for F1 females) and on the epididymis of all male offspring in the 284, 579, and 879 mg/kg-day groups. All dams survived until the pups were weaned. No clinical signs observed in dams (during gestation or lactation) were considered to be treatment related. On GD 18, there was a significant and biologically relevant decrease in dam body weight in the 20,000 ppm group (decreased 10% compared to controls) which coincided with a 36% decrease in weight gain in the same group. Body weights were significantly increased at 10,000 ppm on GD 18 and LD 0, although the magnitude of these increases was small at ~5%. The study also reports a significant reduction in dam weight gain in the 10,000 ppm group during lactation (LD 0-28); however, this is due to the significantly higher body weights in these animals on LD 0. Dam feed consumption during gestation or lactation were not reported by the authors. The gestation index was significantly decreased in the 5,000 ppm (27% decreased) and 20,000 ppm (77% decreased) groups, but not in the 7,500 or 10,000 ppm groups. Only the 5,000 ppm group exhibited a significantly decreased gestation length (2% decrease) as compared to the control group. No results were provided for the number of implantation sites observed in the uteri of female rats exposed to DBP that did not litter. At birth, the number of pups per litter and number of live pups per litter were drastically and significantly reduced by 72% and 71%, respectively, in the 20,000 ppm group. By PND 1, all pups in the 20,000 ppm group died. The percentage of live pups per litter was also significantly reduced in the 10,000 ppm group on PND 1 (6%) and PND 4 (7%) prior to culling. The number of rats/sex/litter and litter weights (PND 0 & 1) were not reported by the study authors. Birth weights were significantly decreased at ≥7,500 ppm in feed and on PNDs 1, 4, 7, and 14, pup body weights were decreased at ≥5,000 ppm in feed. On PNDs 21 and 28, pup body weights were statistically significantly reduced in dose-related manner at ≥2,500 ppm in feed; however, the changes were small (<5% decrease relative to controls) in the 2,500 ppm group. At 5,000 ppm in feed, pup weights were decreased >5%, relative to controls, on PND 28. No lesions were revealed during the necropsy of one male and one female pup per litter sacrificed at weaning.No mortality or clinical signs related to treatment were observed in F1 offspring post-weaning. Although offspring body weights were measured weekly, only body weights on weeks 1 and 4 of treatment were reported. F1 male body weights were significantly decreased by 4-14% at ≥579 mg/kg-day at both time points, although the change was not clearly dose related. F1 female body weights were decreased by 14% at 836 mg/kg-day and by 12% at 1,104 mg/kg-day on week 1. Body weight gains were significantly reduced in F1 males (11-13%) at 879 and 1,165 mg/kg-day, and in females only in the 133 and 500 mg/kg-day groups. Average feed consumption of F1 offspring was not altered with treatment. F1 necropsy weights were significantly higher than the weights recorded after 28 days on feed, suggesting some time elapsed prior to sacrifice. F1 male necropsy weights were 5%, 9%, and 5% lower than controls at 579, 879, and 1,165 mg/kg-day, and these changes were statistically, but not biologically significant. There were no treatment related changes in female necropsy body weights. Notable statistically significant organ weight changes included dose-related increases in absolute (23-41%) and relative (8-49%) liver weights at ≥579 and ≥143 mg/kg-day, respectively, in F1 males, and increases in absolute (6-21%) and relative (6-27%) liver weights in F1 females at ≥275 mg/kg-day. Although statistically significant, the magnitudes of change at 143 mg/kg-day in F1 males were small (<10%). F1 males also showed slight but significant reductions in absolute and relative testis weights at ≥879 mg/kg-day and at 1,165 mg/kg-day, respectively, which was associated with histopathological changes. Changes in kidney weights were observed in both sexes, but were not clearly dose related. In males, relative, but not absolute kidney weights were significantly increased ≥10%, relative to controls, at ≥579 mg/kg-day. Kidney weight changes in females were all small in magnitude (<10%) or not dose-responsive. Other organ weight changes were likely not treatment related and included increases in relative, but not absolute thymus weights at ≥879 mg/kg-day in males, and a sporadic increase in relative heart and lung weights in 879 mg/kg-day males and 836 mg/kg-day females, respectively. No gross lesions were observed at necropsy in male or female pups after 4 weeks of exposure. From histologic examination, all male rats in the 879 and 1,165 mg/kg-day groups exhibited mild to marked hypospermia of the epididymis. Four of the ten males in the 579 mg/kg-day group displayed mild hypospermia of the epididymis. There were no differences in germ cell production or maturation. The authors selected 1,165 mg/kg-day for males and 1,104 mg/kg-day for females as the maximum perinatal exposure levels to be used in follow-up developmental studies. Based on the data presented in the study, a NOAEL of 143 mg/kg-day and a LOAEL of 284 mg/kg-day was identified based on both statistically and biologically significant increases in relative liver weights in F1 males exposed in utero, during lactation, and in feed for 4 weeks.Litter effects, notably reductions in pup body weights, were observed when dams were administered ≥5,000 ppm in feed.

[14] 680063: 5.DBP MPE Determination study in rats. In a maximum perinatal exposure (MPE) determination study as part of a group of NTP studies on phthalates, pregnant females (18-19/group) received feed containing 1,250, 2,500, 5,000, 7,500, 10,000, or 20,000 ppm of Dibutyl phthalate (DBP) for 7 days/week from the time pregnancy was confirmed (gestation day 0 (GD 0) throughout gestation and lactation. The control group, which received un-dosed feed, consisted of 30 pregnant females. The authors did not report doses in mg/kg-day or provide food consumption data for dams. Pups were weaned on day 28 post-partum and selected pups (up to 10 per group) were placed on the same DBP or control diet as their respective dams for 4 weeks. Mean doses based on male offspring body weights and food consumption were reported to be 0, 143, 284, 579, 879, and 1,165 mg/kg-day. Mean doses based on female offspring body weights and food consumption were reported to be 0, 133, 275, 500, 836, and 1,104 mg/kg-day. Dams were observed twice daily during gestation and lactation and observations were recorded "as necessary;" dams were also monitored for mortality. Dam body weights were recorded on GD 0 and 18 and weekly starting on lactation day (LD) 0. Total dam weight gain during gestation (GDs 0-18) and lactation (LDs 0-28) were calculated. Dam feed consumption was measured on GDs 7, 14, and 21 and weekly during lactation. The gestation index (females that delivered at least one live pup/sperm-positive females) and mean gestation length were recorded for each treatment group. Uteri of females exposed to 20,000 ppm in feed that did not litter were examined for implantation sites.Developmental endpoints included the sex and number of pups per litter, litter weights (PNDs 0 & 1), number and percent of live pups per litter (PND 0, 1, 4, 7, 14, 21, and 28), and pup body weights (PNDs 0, 1, 4, 7, and weekly thereafter). On day 4 post-partum, the litters were randomly culled to a maximum of eight rats/litter. One rat of each sex from each litter was sacrificed at weaning for necropsy. During the post-weaning period, F1 offspring were observed twice daily, any

mortality was noted and observations were recorded on a weekly basis. Offspring body weights and feed consumption were measured weekly. The change in F1 body weights from week 1 to week 4 on their respective diets and the final body weights relative to controls (%) were calculated. The time elapsed between the end of the 4-week feeding period and sacrifice was not specified. At sacrifice, F1 animals were necropsied and terminal body weights were recorded. Liver, right testis, right kidney, thymus, heart, and lungs were weighed. Histologic examinations were performed on >30 organs/tissues from all F1 offspring in the control and 10,000 ppm group. In addition, histologic examinations were performed on gross lesions of rats in the lower exposure groups (143, 284, 579, and 879 mg/kg-day for F1 males and 133, 275, 500, and 836 mg/kg-day for F1 females) and on the epididymis of all male offspring in the 284, 579, and 879 mg/kg-day groups. All dams survived until the pups were weaned. No clinical signs observed in dams (during gestation or lactation) were considered to be treatment related. On GD 18, there was a significant and biologically relevant decrease in dam body weight in the 20,000 ppm group (decreased 10% compared to controls) which coincided with a 36% decrease in weight gain in the same group. Body weights were significantly increased at 10,000 ppm on GD 18 and LD 0, although the magnitude of these increases was small at ~5%. The study also reports a significant reduction in dam weight gain in the 10,000 ppm group during lactation (LD 0-28); however, this is due to the significantly higher body weights in these animals on LD 0. Dam feed consumption during gestation or lactation were not reported by the authors. The gestation index was significantly decreased in the 5,000 ppm (27% decreased) and 20,000 ppm (77% decreased) groups, but not in the 7,500 or 10,000 ppm groups. Only the 5,000 ppm group exhibited a significantly decreased gestation length (2% decrease) as compared to the control group. No results were provided for the number of implantation sites observed in the uteri of female rats exposed to DBP that did not litter. At birth, the number of pups per litter and number of live pups per litter were drastically and significantly reduced by 72% and 71%, respectively, in the 20,000 ppm group. By PND 1, all pups in the 20,000 ppm group died. The percentage of live pups per litter was also significantly reduced in the 10,000 ppm group on PND 1 (6%) and PND 4 (7%) prior to culling. The number of rats/sex/litter and litter weights (PND 0 & 1) were not reported by the study authors. Birth weights were significantly decreased at ≥7,500 ppm in feed and on PNDs 1, 4, 7, and 14, pup body weights were decreased at ≥5,000 ppm in feed. On PNDs 21 and 28, pup body weights were statistically significantly reduced in dose-related manner at ≥2,500 ppm in feed; however, the changes were small (<5% decrease relative to controls) in the 2,500 ppm group. At 5,000 ppm in feed, pup weights were decreased >5%, relative to controls, on PND 28. No lesions were revealed during the necropsy of one male and one female pup per litter sacrificed at weaning.No mortality or clinical signs related to treatment were observed in F1 offspring post-weaning. Although offspring body weights were measured weekly, only body weights on weeks 1 and 4 of treatment were reported. F1 male body weights were significantly decreased by 4-14% at ≥579 mg/kg-day at both time points, although the change was not clearly dose related. F1 female body weights were decreased by 14% at 836 mg/kg-day and by 12% at 1,104 mg/kg-day on week 1. Body weight gains were significantly reduced in F1 males (11-13%) at 879 and 1,165 mg/kg-day, and in females only in the 133 and 500 mg/kg-day groups. Average feed consumption of F1 offspring was not altered with treatment. F1 necropsy weights were significantly higher than the weights recorded after 28 days on feed, suggesting some time elapsed prior to sacrifice. F1 male necropsy weights were 5%, 9%, and 5% lower than controls at 579, 879, and 1,165 mg/kg-day, and these changes were statistically, but not biologically significant. There were no treatment related changes in female necropsy body weights. Notable statistically significant organ weight changes included dose-related increases in absolute (23-41%) and relative (8-49%) liver weights at ≥579 and ≥143 mg/kg-day, respectively, in F1 males, and increases in absolute (6-21%) and relative (6-27%) liver weights in F1 females at ≥275 mg/kg-day. Although statistically significant, the magnitudes of change at 143 mg/kg-day in F1 males were small (<10%). F1 males also showed slight but significant reductions in absolute and relative testis weights at ≥879 mg/kg-day and at 1,165 mg/kg-day, respectively, which was associated with histopathological changes. Changes in kidney weights were observed in both sexes, but were not clearly dose related. In males, relative, but not absolute kidney weights were significantly increased ≥10%, relative to controls, at ≥579 mg/kg-day. Kidney weight changes in females were all small in magnitude (<10%) or not dose-responsive. Other organ weight changes were likely not treatment related and included increases in relative, but not absolute thymus weights at ≥879 mg/kg-day in males, and a sporadic increase in relative heart and lung weights in 879 mg/kg-day males and 836 mg/kg-day females, respectively. No gross lesions were observed at necropsy in male or female pups after 4 weeks of exposure. From histologic examination, all male rats in the 879 and 1,165 mg/kg-day groups exhibited mild to marked hypospermia of the epididymis. Four of the ten males in the 579 mg/kg-day group displayed mild hypospermia of the epididymis. There were no differences in germ cell production or maturation. The authors selected 1,165 mg/kg-day for males and 1,104 mg/kg-day for females as the maximum perinatal exposure levels to be used in follow-up developmental studies. Based on the data presented in the study, a NOAEL of 143 mg/kg-day and a LOAEL of 284 mg/kg-day was identified based on both statistically and biologically significant increases in relative liver weights in F1 males exposed in utero, during lactation, and in feed for 4 weeks.Litter effects, notably reductions in pup body weights, were observed when dams were administered ≥5,000 ppm in feed.

[15] 680063: 6. In a maximum perinatal exposure (MPE) determination study as part of a group of NTP studies on phthalates, pregnant C57BL/6 female mice (18-20/group) received feed containing 1,250, 2,500, 5,000, 7,500, 10,000, or 20,000 ppm of Dibutyl phthalate (DBP) for 7 days/week from the time pregnancy was confirmed (gestation day 0 (GD 0)) throughout gestation and lactation. The control group, which received un-dosed feed, consisted of 20 pregnant females. The strain of the female mice was C57BL/6 and male mice was C3H; the pups were therefore B6C3F1. The authors did not report doses in mg/kg-day or provide food consumption data for dams. Pups were weaned on day 28 post-partum and selected pups (up to 10 per group) were placed on the same DBP or control diet as their respective dams for 4 weeks. Mean doses based on male offspring body weights and food consumption were reported to be 0, 199, 437, 750, 1,286, and 3,804 mg/kg-day. Mean doses based on female offspring body weights and food consumption were reported to be 0, 170, 399, 714, and 1,060 mg/kg-day. Dams were observed twice daily during gestation and lactation and observations were recorded “as necessary;” dams were also monitored for mortality. Dam body weights were recorded on GD 0 and 17 and weekly starting on lactation day (LD) 0. Total dam weight gain during gestation (GDs 0-17) and lactation (LDs 0-28) were calculated. Dam feed consumption was measured on GDs 7 and 14 and weekly during lactation. The gestation index (females that delivered at least one live pup/sperm-positive females) and mean gestation length were recorded for each treatment group. Uteri of females exposed to 20,000 ppm in feed that did not litter were examined for implantation sites. Developmental endpoints included the sex and number of pups per litter, litter weights (PNDs 0 & 1), number and percent of live pups per litter (PND 0, 1, 4, 7, 14, 21, and 28), and pup body weights (PNDs 0, 1, 4, 7, and weekly thereafter). On day 4 post-partum, the litters were randomly culled to a maximum of six mice/litter. One mouse of each sex from each litter was sacrificed at weaning for necropsy. During the post-weaning period, F1 offspring were observed twice daily, any mortality was noted, and observations were recorded on a weekly basis. Offspring body weights and feed consumption were measured weekly. The change in F1 body weights from week 1 to week 4 on their respective diets and the final body weights relative to controls (%) were calculated. The time elapsed between the end of the 4-week feeding period and sacrifice was not specified. At sacrifice, F1 animals were necropsied and terminal body weights were recorded. Liver, right testis, right kidney, thymus, heart, and lungs were weighed. Histologic examinations were performed on >30 organs/tissues from all F1 offspring in the control groups (both sexes), 1,060 mg/kg-day group of F1 females, and 1,286 and 3,804 mg/kg-day groups of F1 males. In addition, histologic examinations were performed on gross lesions (≤750 mg/kg-day among F1 males, ≤714 mg/kg-day among F1 females), the forestomach (all study groups), and brain and kidneys (750 mg/kg-day among F1 males, 714 mg/kg-day among F1 females). One dam in each of the 0, 5,000, and 7,500 ppm groups died during the gestation period. An increased incidence of cannibalization of pups was present in the 7,500 and 10,000 ppm groups as compared to the control group. No other clinical signs observed in dams (during gestation or lactation) were considered to be treatment related. On GD 17, there was a significant and biologically relevant decrease in dam body weight in the 10,000 ppm (decreased 17% compared to controls) and 20,000 ppm (decreased 34%) groups. Total dam body weight gain during gestation exhibited a dose-dependent decrease, reaching significance in the 7,500 ppm (18% decreased), 10,000 ppm (34%), and 20,000 ppm (71%) groups. Dam body weights and total weight gain during lactation were not significantly altered with treatment. Dam feed consumption during gestation or lactation were not reported by the authors. The gestation index was significantly decreased in the 20,000 ppm group, as none of the dams in this group delivered at least one live pup. No results were provided for the number of implantation sites observed in the uteri of female mice exposed to DBP that did not litter. At birth, the number of pups per litter and the number of live pups per litter were significantly reduced by 28% and 58%, respectively, in the 7,500 ppm group and reduced by 48% and 94%, respectively, in the 10,000 ppm group. Similarly, the percentage of live pups per litter at birth was also significantly decreased in a dose-dependent manner in the 7,500 ppm (53% decrease) and 10,000 ppm (89%) groups. Only a single male pup in the 10,000 ppm group survived beyond PND 1. The percentage of live pups per litter was also significantly decreased on PND 1 (12%) in the 2,500 ppm group. The number of mice/sex/litter and litter weights (PND 0 & 1) were not reported by the study authors. Birth weights were significantly decreased only in the 10,000 ppm group (decreased 14% compared to controls). No lesions were revealed during the necropsy of one male and one female pup per litter sacrificed at weaning. No mortality or clinical signs related to treatment were observed in F1 offspring

post-weaning. Although offspring body weights were measured weekly, only body weights on weeks 1 and 4 of treatment were reported. F1 male body weights were significantly decreased on weeks 1 and 4 by 11% and 6% at 437 mg/kg-day, by 13% and 10% at 750 mg/kg-day, and by 21% and 12% at 1,286 mg/kg-day, respectively. F1 female body weights were not statistically significantly altered with treatment. In addition, DBP treatment did not significantly impact body weight gains or average feed consumption in F1 males and females. F1 male necropsy body weights exhibited a dose-related decrease and were significantly reduced by 11% and 12% at 750 mg/kg-day and 1,286 mg/kg-day, respectively. Body weights were also statistically significantly reduced at 437 mg/kg-day, however, the magnitude of change was <10% (i.e. 7%). Necropsy body weights of F1 females dosed at 1,060 mg/kg-day were significantly lower (by 11%) than control group weights. Notable statistically significant organ weight changes included dose-related increases in relative liver weights (6-23%) and relative lung weights (13-22%) at ≥199 mg/kg-day in F1 males, and dose-related increases in relative right kidney weights (12-21%) in F1 females at ≥170 mg/kg-day. Although statistically significant, the magnitudes of change at 199 mg/kg-day and 437 mg/kg-day for relative liver weight among F1 males were small (<10%). F1 males also exhibited significant increases in relative right testis weights (11-14%) and absolute liver weights (8%) at ≥437 mg/kg-day and 1,286 mg/kg-day, respectively. Absolute kidney weights were significantly decreased >10%, relative to controls, at ≥750 mg/kg-day in F1 males and significantly increased >10%, relative to controls, at ≥170 mg/kg-day in F1 females (except at 1,060 mg/kg-day which was non-significantly increased 7%). Absolute and relative thymus weights were significantly increased >10% as compared to the control group at ≥750 mg/kg-day in F1 males; however, these changes were not dose-responsive. No gross lesions were observed at necropsy in male or female pups after 4 weeks of exposure. No histopathological lesions were observed at ≤1,286 mg/kg-day in F1 males or at ≤1,060 mg/kg-day in F1 females. The one surviving male pup of the 3,804 mg/kg-day group presented with cytoplasmic alteration of the liver, consistent with peroxisome proliferation. The study authors selected 750 mg/kg-day for males and 714 mg/kg-day for females as the maximum perinatal exposure levels (5,000 ppm) to be used in follow-up developmental studies. Based on the data presented in the study a LOAEL of 170 mg/kg-day was identified based on statistically and biologically significant increases in relative right kidney weights (in F1 females) after exposure in utero, during lactation, and in feed for 4 weeks. Litter effects, notably reductions in the number of live pups per litter, were observed when dams were administered ≥7,500 ppm in feed.

[16] 680063: 6. In a maximum perinatal exposure (MPE) determination study as part of a group of NTP studies on phthalates, pregnant C57BL/6 female mice (18-20/group) received feed containing 1,250, 2,500, 5,000, 7,500, 10,000, or 20,000 ppm of Dibutyl phthalate (DBP) for 7 days/week from the time pregnancy was confirmed (gestation day 0 (GD 0)) throughout gestation and lactation. The control group, which received un-dosed feed, consisted of 20 pregnant females. The strain of the female mice was C57BL/6 and male mice was C3H; the pups were therefore B6C3F1. The authors did not report doses in mg/kg-day or provide food consumption data for dams. Pups were weaned on day 28 post-partum and selected pups (up to 10 per group) were placed on the same DBP or control diet as their respective dams for 4 weeks. Mean doses based on male offspring body weights and food consumption were reported to be 0, 199, 437, 750, 1,286, and 3,804 mg/kg-day. Mean doses based on female offspring body weights and food consumption were reported to be 0, 170, 399, 714, and 1,060 mg/kg-day. Dams were observed twice daily during gestation and lactation and observations were recorded “as necessary;” dams were also monitored for mortality. Dam body weights were recorded on GD 0 and 17 and weekly starting on lactation day (LD) 0. Total dam weight gain during gestation (GDs 0-17) and lactation (LDs 0-28) were calculated. Dam feed consumption was measured on GDs 7 and 14 and weekly during lactation. The gestation index (females that delivered at least one live pup/sperm-positive females) and mean gestation length were recorded for each treatment group. Uteri of females exposed to 20,000 ppm in feed that did not litter were examined for implantation sites. Developmental endpoints included the sex and number of pups per litter, litter weights (PNDs 0 & 1), number and percent of live pups per litter (PND 0, 1, 4, 7, 14, 21, and 28), and pup body weights (PNDs 0, 1, 4, 7, and weekly thereafter). On day 4 post-partum, the litters were randomly culled to a maximum of six mice/litter. One mouse of each sex from each litter was sacrificed at weaning for necropsy. During the post-weaning period, F1 offspring were observed twice daily, any mortality was noted, and observations were recorded on a weekly basis. Offspring body weights and feed consumption were measured weekly. The change in F1 body weights from week 1 to week 4 on their respective diets and the final body weights relative to controls (%) were calculated. The time elapsed between the end of the 4-week feeding period and sacrifice was not specified. At sacrifice, F1 animals were necropsied and terminal body weights were recorded. Liver, right testis, right kidney, thymus, heart, and lungs were weighed. Histologic examinations were performed on >30 organs/tissues from all F1 offspring in the control groups (both sexes), 1,060 mg/kg-day group of F1 females, and 1,286 and 3,804 mg/kg-day groups of F1 males. In addition, histologic examinations were performed on gross lesions (≤750 mg/kg-day among F1 males, ≤714 mg/kg-day among F1 females), the forestomach (all study groups), and brain and kidneys (750 mg/kg-day among F1 males, 714 mg/kg-day among F1 females). One dam in each of the 0, 5,000, and 7,500 ppm groups died during the gestation period. An increased incidence of cannibalization of pups was present in the 7,500 and 10,000 ppm groups as compared to the control group. No other clinical signs observed in dams (during gestation or lactation) were considered to be treatment related. On GD 17, there was a significant and biologically relevant decrease in dam body weight in the 10,000 ppm (decreased 17% compared to controls) and 20,000 ppm (decreased 34%) groups. Total dam body weight gain during gestation exhibited a dose-dependent decrease, reaching significance in the 7,500 ppm (18% decreased), 10,000 ppm (34%), and 20,000 ppm (71%) groups. Dam body weights and total weight gain during lactation were not significantly altered with treatment. Dam feed consumption during gestation or lactation were not reported by the authors. The gestation index was significantly decreased in the 20,000 ppm group, as none of the dams in this group delivered at least one live pup. No results were provided for the number of implantation sites observed in the uteri of female mice exposed to DBP that did not litter. At birth, the number of pups per litter and the number of live pups per litter were significantly reduced by 28% and 58%, respectively, in the 7,500 ppm group and reduced by 48% and 94%, respectively, in the 10,000 ppm group. Similarly, the percentage of live pups per litter at birth was also significantly decreased in a dose-dependent manner in the 7,500 ppm (53% decrease) and 10,000 ppm (89%) groups. Only a single male pup in the 10,000 ppm group survived beyond PND 1. The percentage of live pups per litter was also significantly decreased on PND 1 (12%) in the 2,500 ppm group. The number of mice/sex/litter and litter weights (PND 0 & 1) were not reported by the study authors. Birth weights were significantly decreased only in the 10,000 ppm group (decreased 14% compared to controls). No lesions were revealed during the necropsy of one male and one female pup per litter sacrificed at weaning. No mortality or clinical signs related to treatment were observed in F1 offspring post-weaning. Although offspring body weights were measured weekly, only body weights on weeks 1 and 4 of treatment were reported. F1 male body weights were significantly decreased on weeks 1 and 4 by 11% and 6% at 437 mg/kg-day, by 13% and 10% at 750 mg/kg-day, and by 21% and 12% at 1,286 mg/kg-day, respectively. F1 female body weights were not statistically significantly altered with treatment. In addition, DBP treatment did not significantly impact body weight gains or average feed consumption in F1 males and females. F1 male necropsy body weights exhibited a dose-related decrease and were significantly reduced by 11% and 12% at 750 mg/kg-day and 1,286 mg/kg-day, respectively. Body weights were also statistically significantly reduced at 437 mg/kg-day, however, the magnitude of change was <10% (i.e. 7%). Necropsy body weights of F1 females dosed at 1,060 mg/kg-day were significantly lower (by 11%) than control group weights. Notable statistically significant organ weight changes included dose-related increases in relative liver weights (6-23%) and relative lung weights (13-22%) at ≥199 mg/kg-day in F1 males, and dose-related increases in relative right kidney weights (12-21%) in F1 females at ≥170 mg/kg-day. Although statistically significant, the magnitudes of change at 199 mg/kg-day and 437 mg/kg-day for relative liver weight among F1 males were small (<10%). F1 males also exhibited significant increases in relative right testis weights (11-14%) and absolute liver weights (8%) at ≥437 mg/kg-day and 1,286 mg/kg-day, respectively. Absolute kidney weights were significantly decreased >10%, relative to controls, at ≥750 mg/kg-day in F1 males and significantly increased >10%, relative to controls, at ≥170 mg/kg-day in F1 females (except at 1,060 mg/kg-day which was non-significantly increased 7%). Absolute and relative thymus weights were significantly increased >10% as compared to the control group at ≥750 mg/kg-day in F1 males; however, these changes were not dose-responsive. No gross lesions were observed at necropsy in male or female pups after 4 weeks of exposure. No histopathological lesions were observed at ≤1,286 mg/kg-day in F1 males or at ≤1,060 mg/kg-day in F1 females. The one surviving male pup of the 3,804 mg/kg-day group presented with cytoplasmic alteration of the liver, consistent with peroxisome proliferation. The study authors selected 750 mg/kg-day for males and 714 mg/kg-day for females as the maximum perinatal exposure levels (5,000 ppm) to be used in follow-up developmental studies. Based on the data presented in the study a LOAEL of 170 mg/kg-day was identified based on statistically and biologically significant increases in relative right kidney weights (in F1 females) after exposure in utero, during lactation, and in feed for 4 weeks. Litter effects, notably reductions in the number of live pups per litter, were observed when dams were administered ≥7,500 ppm in feed.

[17] 680063: 6. In a maximum perinatal exposure (MPE) determination study as part of a group of NTP studies on phthalates, pregnant C57BL/6 female mice (18-20/group) received feed containing 1,250, 2,500, 5,000, 7,500,

10,000, or 20,000 ppm of Dibutyl phthalate (DBP) for 7 days/week from the time pregnancy was confirmed (gestation day 0 (GD 0)) throughout gestation and lactation. The control group, which received un-dosed feed, consisted of 20 pregnant females. The strain of the female mice was C57BL/6 and male mice was C3H; the pups were therefore B6C3F1. The authors did not report doses in mg/kg-day or provide food consumption data for dams. Pups were weaned on day 28 post-partum and selected pups (up to 10 per group) were placed on the same DBP or control diet as their respective dams for 4 weeks. Mean doses based on male offspring body weights and food consumption were reported to be 0, 199, 437, 750, 1,286, and 3,804 mg/kg-day. Mean doses based on female offspring body weights and food consumption were reported to be 0, 170, 399, 714, and 1,060 mg/kg-day. Dams were observed twice daily during gestation and lactation and observations were recorded "as necessary;" dams were also monitored for mortality. Dam body weights were recorded on GD 0 and 17 and weekly starting on lactation day (LD) 0. Total dam weight gain during gestation (GDs 0-17) and lactation (LDs 0-28) were calculated. Dam feed consumption was measured on GDs 7 and 14 and weekly during lactation. The gestation index (females that delivered at least one live pup/sperm-positive females) and mean gestation length were recorded for each treatment group. Uteri of females exposed to 20,000 ppm in feed that did not litter were examined for implantation sites. Developmental endpoints included the sex and number of pups per litter, litter weights (PNDs 0 & 1), number and percent of live pups per litter (PND 0, 1, 4, 7, 14, 21, and 28), and pup body weights (PNDs 0, 1, 4, 7, and weekly thereafter). On day 4 post-partum, the litters were randomly culled to a maximum of six mice/litter. One mouse of each sex from each litter was sacrificed at weaning for necropsy. During the post-weaning period, F1 offspring were observed twice daily, any mortality was noted, and observations were recorded on a weekly basis. Offspring body weights and feed consumption were measured weekly. The change in F1 body weights from week 1 to week 4 on their respective diets and the final body weights relative to controls (%) were calculated. The time elapsed between the end of the 4-week feeding period and sacrifice was not specified. At sacrifice, F1 animals were necropsied and terminal body weights were recorded. Liver, right testis, right kidney, thymus, heart, and lungs were weighed. Histologic examinations were performed on >30 organs/tissues from all F1 offspring in the control groups (both sexes), 1,060 mg/kg-day group of F1 females, and 1,286 and 3,804 mg/kg-day groups of F1 males. In addition, histologic examinations were performed on gross lesions (≤750 mg/kg-day among F1 males, ≤714 mg/kg-day among F1 females), the forestomach (all study groups), and brain and kidneys (750 mg/kg-day among F1 males, 714 mg/kg-day among F1 females). One dam in each of the 0, 5,000, and 7,500 ppm groups died during the gestation period. An increased incidence of cannibalization of pups was present in the 7,500 and 10,000 ppm groups as compared to the control group. No other clinical signs observed in dams (during gestation or lactation) were considered to be treatment related. On GD 17, there was a significant and biologically relevant decrease in dam body weight in the 10,000 ppm (decreased 17% compared to controls) and 20,000 ppm (decreased 34%) groups. Total dam body weight gain during gestation exhibited a dose-dependent decrease, reaching significance in the 7,500 ppm (18% decreased), 10,000 ppm (34%), and 20,000 ppm (71%) groups. Dam body weights and total weight gain during lactation were not significantly altered with treatment. Dam feed consumption during gestation or lactation were not reported by the authors. The gestation index was significantly decreased in the 20,000 ppm group, as none of the dams in this group delivered at least one live pup. No results were provided for the number of implantation sites observed in the uteri of female mice exposed to DBP that did not litter. At birth, the number of pups per litter and the number of live pups per litter were significantly reduced by 28% and 58%, respectively, in the 7,500 ppm group and reduced by 48% and 94%, respectively, in the 10,000 ppm group. Similarly, the percentage of live pups per litter at birth was also significantly decreased in a dose-dependent manner in the 7,500 ppm (53% decrease) and 10,000 ppm (89%) groups. Only a single male pup in the 10,000 ppm group survived beyond PND 1. The percentage of live pups per litter was also significantly decreased on PND 1 (12%) in the 2,500 ppm group. The number of mice/sex/litter and litter weights (PND 0 & 1) were not reported by the study authors. Birth weights were significantly decreased only in the 10,000 ppm group (decreased 14% compared to controls). No lesions were revealed during the necropsy of one male and one female pup per litter sacrificed at weaning. No mortality or clinical signs related to treatment were observed in F1 offspring post-weaning. Although offspring body weights were measured weekly, only body weights on weeks 1 and 4 of treatment were reported. F1 male body weights were significantly decreased on weeks 1 and 4 by 11% and 6% at 437 mg/kg-day, by 13% and 10% at 750 mg/kg-day, and by 21% and 12% at 1,286 mg/kg-day, respectively. F1 female body weights were not statistically significantly altered with treatment. In addition, DBP treatment did not significantly impact body weight gains or average feed consumption in F1 males and females. F1 male necropsy body weights exhibited a dose-related decrease and were significantly reduced by 11% and 12% at 750 mg/kg-day and 1,286 mg/kg-day, respectively. Body weights were also statistically significantly reduced at 437 mg/kg-day, however, the magnitude of change was <10% (i.e. 7%). Necropsy body weights of F1 females dosed at 1,060 mg/kg-day were significantly lower (by 11%) than control group weights. Notable statistically significant organ weight changes included dose-related increases in relative liver weights (6-23%) and relative lung weights (13-22%) at ≥199 mg/kg-day in F1 males, and dose-related increases in relative right kidney weights (12-21%) in F1 females at ≥170 mg/kg-day. Although statistically significant, the magnitudes of change at 199 mg/kg-day and 437 mg/kg-day for relative liver weight among F1 males were small (<10%). F1 males also exhibited significant increases in relative right testis weights (11-14%) and absolute liver weights (8%) at ≥437 mg/kg-day and 1,286 mg/kg-day, respectively. Absolute kidney weights were significantly decreased >10%, relative to controls, at ≥750 mg/kg-day in F1 males and significantly increased >10%, relative to controls, at ≥170 mg/kg-day in F1 females (except at 1,060 mg/kg-day which was non-significantly increased 7%). Absolute and relative thymus weights were significantly increased >10% as compared to the control group at ≥750 mg/kg-day in F1 males; however, these changes were not dose-responsive. No gross lesions were observed at necropsy in male or female pups after 4 weeks of exposure. No histopathological lesions were observed at ≤1,286 mg/kg-day in F1 males or at ≤1,060 mg/kg-day in F1 females. The one surviving male pup of the 3,804 mg/kg-day group presented with cytoplasmic alteration of the liver, consistent with peroxisome proliferation. The study authors selected 750 mg/kg-day for males and 714 mg/kg-day for females as the maximum perinatal exposure levels (5,000 ppm) to be used in follow-up developmental studies. Based on the data presented in the study a LOAEL of 170 mg/kg-day was identified based on statistically and biologically significant increases in relative right kidney weights (in F1 females) after exposure in utero, during lactation, and in feed for 4 weeks. Litter effects, notably reductions in the number of live pups per litter, were observed when dams were administered ≥7,500 ppm in feed.

[18] 680063: 7. In a developmental and extended exposure study as part of a group of NTP studies on phthalates, 71 pregnant female F344/N rats received feed containing 10,000 ppm of Dibutyl phthalate (DBP; purity >98%) for 7 days/week from the time pregnancy was confirmed (gestation day 0 (GD 0)) throughout gestation and lactation. The control group, which received un-dosed feed, consisted of 12 females. The authors did not report doses in mg/kg-day or provide food consumption data for dams. Pups were weaned on day 28 post-partum and selected pups (90 exposed pups/sex (not exceeding 3 pups/sex from each litter) and 15 controls pups) were placed on the same DBP or control diet as their respective dams for 4 weeks. At the conclusion of this 4-week period, the F1 offspring were maintained on 0, 2,500, 5,000, 10,000, 20,000, or 40,000 ppm DBP feed (10/sex/group) for 13 weeks (7 days/week) in an adult dietary exposure. Mean doses based on male offspring body weights and food consumption were reported to be 0, 138, 279, 571, 1,262, and 2,495 mg/kg-day. Mean doses based on female offspring body weights and food consumption were reported to be 0, 147, 294, 593, 1,182, and 2,445 mg/kg-day. The two control groups for this 13-week exposure included F1 rats that were exposed to 0 ppm DBP from gestation to the conclusion of the study (referred to as 0:0 group) and F1 rats that were exposed to 10,000 ppm DBP during gestation, lactation, and for 4 weeks post-weaning but not during the 13-week dietary exposure (referred to as MPE:0 group). Dams were observed twice daily during gestation and lactation and observations were recorded "as necessary" during gestation and weekly during lactation. Dams were also monitored for mortality. Dam body weights were recorded on GD 0 and 20 and weekly starting on lactation day (LD) 0. Total dam weight gain during gestation (GDs 0-20) and lactation (LDs 0-28) were calculated. Dam feed consumption was measured on GDs 0, 4, 7, 10, 14, 17, and 20 and twice/week during lactation. The mating index (sperm-positive females/total females), fertility index (females delivering at least one pup/sperm-positive females), gestation index (females delivering at least one live pup/sperm-positive females), and mean gestation length were recorded for each treatment group. Developmental endpoints included the sex and number of pups per litter, litter weights (PNDs 0 & 1), number and percent of live pups per litter (PND 0, 1, 4, 7, 14, 21, and 28), and pup body weights (PNDs 0, 1, 4, 7, and weekly thereafter). On day 4 post-partum, the litters were randomly culled to a maximum of eight rats/litter. At weaning, liver samples from 10 male and 10 female rats from each exposure group (0 and 10,000 ppm) were evaluated for liver weight and liver peroxisomal proliferation by measuring peroxisomal palmitoyl-CoA oxidase activity. During the post-weaning period, F1 offspring were observed twice daily, any mortality was noted, and observations were recorded on a weekly basis. Offspring body weights and feed consumption were recorded weekly. The change in F1 body weights from week 1 to week 13 of the adult dietary exposure and the final body weights relative to controls (%) were calculated. Blood for extensive hematology (10 parameters) and clinical chemistry (12 parameters) evaluations was collected from 10 rats/sex/group at the end of the 13-week feeding period. Serum samples from all male rats were saved for further analysis. The time elapsed between the end of the 13-week feeding period and sacrifice was not specified. However, the authors specify that twelve days prior to sacrifice, the vaginal vaults of 10 females/group were lavaged and the

collected vaginal fluid and cells were stained to determine estrous cycle stage (estrous cycle length, percentage of time spent in the various estrous stages). At sacrifice, F1 animals were necropsied and terminal body weights were recorded. Liver, right kidney, right testis, thymus, heart, and lungs were weighed. Histologic examinations were performed on >30 organs/tissues from all F1 offspring in the control and 20,000 ppm groups. In addition, histologic examinations were performed on gross lesions, liver, and testes in the 10,000 ppm groups. Left epididymis, cauda epididymis, and testis weights, spermatid measurements (absolute and relative spermatid head count, spermatid count), and epididymal spermatozoal measurements (sperm motility, concentration) were recorded in F1 males from the control, 2,500, 10,000, and 20,000 ppm groups. Serum and testis samples from all male rats were analyzed for zinc and testosterone concentrations. Liver peroxisomal proliferation was assessed by measuring peroxisomal palmitoyl-CoA oxidase activity in the livers of five male and five female rats from each exposure group. All dams survived until scheduled sacrifice. No clinical signs observed in dams during gestation were considered to be treatment-related. Clinical signs observed during lactation were not reported. There were no statistically and biologically significant changes in dam body weight during gestation or lactation. Dam feed consumption during gestation or lactation were not reported by the authors. The mating index, fertility index, and gestation index were not significantly different between dams in the control and 10,000 ppm groups. The mean gestation length was slightly, but significantly, decreased in the 10,000 ppm group (22.00 days in control compared with 21.85 days in treated group). At birth, the number of pups per litter was not significantly different between the control and treated groups. Significant decreases in the number of live pups per litter on PNDs 1-28 (12-22%) and percentage of live pups per litter on PNDs 0-4 (8-22%) were seen compared to control. The number of mice/sex/litter and litter weights (PND 0 & 1) were not reported by the study authors. Pups in the 10,000 ppm group exhibited significantly lower body weights throughout lactation from PND 0-28, with weights 8-11% lower than the control group. At weaning, significant increases in liver weights (14% and 25%) and marked increases in peroxisomal palmitoyl-CoA oxidase activity (19-fold and 19-fold) were seen in males and females pups, respectively compared to control.. No mortality or clinical signs related to treatment were observed in F1 offspring in the 4-week post-weaning period. During the 4-week exposure period, the body weights of F1 male and female offspring in the 10,000 ppm group were significantly decreased 7-9% in males on days 8, 15, and 22 and females on days 1, 8, 15, and 22 relative to control. Total body weight gains and feed consumption were not reported for F1 offspring during the 4-week exposure. No mortality was observed during the 13-week dietary exposure of the adult F1 rats. Treatment-related clinical signs observed in the F1 rats after 13 weeks of exposure included emaciation of 40,000 ppm animals and abnormal posture, ruffled fur, hypoactivity, and a higher incidence (8/10) of nasal discharge in 40,000 ppm males. On week 1 of the 13-week exposure period, male and female body weights were significantly reduced (4-8%) in the ≥1,000 ppm groups, as compared to the 0:0 control group. By week 13, body weights were still significantly reduced (5-49%) in males at ≥2,500 ppm, while female body weights were only reduced (9-26%) at 20,000 and 40,000 ppm, compared to the unexposed 0:0 controls . In addition, in the male ≥10,000 ppm and female ≥10,000 ppm groups, body weights were significantly lower than the MPE:0 control group. In comparing the body weights of the two control groups (0:0 and MPE:0), there was a significant decrease in the MPE:0 male body weights on weeks 1 and 13 as compared to the 0:0 group. Among MPE:0 females, body weights were only significantly lower compared to 0:0 controls on week 1. Males in the ≥10,000 ppm groups and females in the ≥20,000 ppm groups gained significantly less weight from week 1 to 13 when compared to both control groups (0:0 and MPE:0). Males in the 40,000 ppm group did not gain any weight at all, and lost 7% of their body weight from week 1 to 13. DBP treatment did not significantly impact average feed consumption in F1 males and females. Notable statistically significant hematological treatment-related changes included decreases in hematocrit, hemoglobin, and erythrocytes in 10,000 and 40,000 ppm males and decreases in hematocrit and hemoglobin in 40,000 ppm females. Although statistically significant, the magnitudes of change in these metrics at 10,000 ppm in F1 males were small (<10%). Reticulocyte, platelet, and lymphocyte counts were significantly increased in F1 males exposed to 40,000 ppm DBP. On the other hand, segmented neutrophil counts were significantly decreased with DBP treatment in 40,000 ppm males. Platelet counts were also significantly higher in males of the 10,000 ppm group (as compared to MPE:0), but not in the 20,000 ppm group. Similar to F1 males, lymphocyte counts in F1 females were significantly increased at 40,000 ppm, compared to both control groups. In 40,000 ppm-exposed F1 males and 10,000 and 40,000 ppm-exposed F1 females, nucleated erythrocytes were significantly increased. There were also statistically significant treatment-related changes in mean cell volume, mean cell hemoglobin, and monocyte counts among F1 females, however, these changes were not dose-dependent or were small in magnitude (<5%). There were no other significant treatment-related changes in hematology parameters.Notable statistically and biologically relevant treatment-related changes in clinical chemistry were present in both F1 males and females. Dose-related significant decreases were observed in cholesterol levels among ≥20,000 ppm males and females and in triglyceride levels among ≥10,000 ppm males and ≥20,000 ppm females, as compared to both control groups. For female cholesterol levels, and male and female triglyceride levels, the magnitudes of decrease were larger when compared to the MPE:0 control group, as opposed to the 0:0 control group. Significant reductions in creatinine (compared to MPE:0) and creatine kinase (compared to control groups) were observed in 40,000 ppm males. Total protein was also significantly reduced with treatment, and total protein levels were lower in 40,000 ppm males and females as compared to both control groups. Alkaline phosphatase and bile acid levels exhibited significant dose-dependent increases in F1 males exposed at ≥20,000 ppm as compared to control groups. Alkaline phosphatase levels were also significantly increased, as compared to both control groups, in a dose-related manner in ≥20,000 ppm females. Bile acid levels were only increased, as compared to MPE:0 rats, in the 40,000 ppm females. Albumin levels were significantly increased in ≥10,000 ppm males and females, however, this increase was not dose related. There were significant treatment-related changes in creatinine levels among females and in alanine aminotransferase and sorbitol dehydrogenase levels among males, however, these changes were either sporadic in nature or not dose-related. There were no other significant treatment-related changes in clinical chemistry parameters. Female rat estrous cycle length and the percentages of time spent in the various estrous stages were not altered with DBP treatment. Compared to unexposed rats, male necropsy body weights were significantly decreased in a dose-responsive manner at ≥2,500 ppm, ranging from 5-50% decreased. On the other hand, when compared to control rats exposed to 10,000 ppm up until the start of the 13-week exposure period, male necropsy body weights were only significantly reduced at 20,000 ppm (14% decreased) and 40,000 ppm (48% decreased). Female necropsy body weights were significantly and dose-dependently reduced in the 20,000 ppm (8-9%) and 40,000 ppm (27-28%) groups, as compared to both control groups. Notable statistically and biologically significant organ weight changes included dose-related increases in relative right kidney weight at ≥10,000 ppm (12-39% compared to both control groups) and relative liver weight at ≥5,000 ppm (13-76% compared to both control groups) and in F1 males, and dose-related increases in relative right kidney weights at 40,000 ppm (18% compared to 0:0 group), relative liver weights at ≥5,000 (10-75% compared to 0:0 group), and absolute liver weights at ≥10,000 ppm (15-28% compared to 0:0 group) in F1 females. Significant reductions in absolute right kidney weights were seen at 40,000 ppm (28-31% in males, 11-13% in females as compared to both control groups). Treatment-related changes in absolute liver weights and absolute and relative right testis weights were observed in males, but were not clearly dose related. In males, absolute and relative heart weights were significantly increased >10%, relative to the MPE:0 group and both control groups, respectively, at 40,000 ppm. In females, absolute lung weights were significantly decreased >10%, relative to the 0:0 group, at 40,000 ppm. Cytoplasmic alteration of the liver was present in the livers of all F1 rats at ≥10,000 ppm (not observed in either control group). These alterations included “more intensely staining eosinophilic cytoplasm and fewer small, clear vacuoles”. Severity of lesions increased with increasing dose from minimal to moderate. Upon examination of ultrastructural changes, peroxisome proliferation was evident in 40,000 ppm males and females. In the testis, incidence of germinal epithelium atrophy was significantly increased at 10,000 ppm (4/10), 20,000 ppm (10/10), and 40,000 ppm (10/10); these lesions were not observed in the either control group. Severity of the lesions increased with increasing dose from minimal to marked. Hypospermia of the epididymis was observed in males exposed to ≥20,000 ppm.. The left cauda epididymal weight of MPE:0 control males was significantly greater than unexposed 0:0 control males. In general, left epididymal and cauda epididymal weights of 2,500, 10,000, and 20,000 ppm exposed males were significantly lower than the MPE:0 control males. Only at 20,000 ppm were left epididymal and cauda epididymal weights significantly reduced compared to the unexposed 0:0 control group. Treatment-related changes in left testis weights were not dose-responsive. Absolute spermatid head counts and spermatid counts were significantly reduced at 20,000 ppm as compared to the unexposed 0:0 group. Sperm motility was not altered with DBP treatment, however, sperm concentration (/g cauda epididymal tissue) was significantly reduced at 20,000 ppm compared to the MPE:0 control.Male serum zinc concentrations were significantly increased at ≥20,000 ppm as compared to the MPE:0 control group. Male serum testosterone concentrations were significantly reduced in the MPE:0 and 40,000 ppm groups as compared to the unexposed 0:0 control group. The testis zinc concentrations were significantly lower at 40,000 ppm as compared to either control group. There were no treatment-related changes in testis testosterone concentrations. Liver peroxisomal palmitoyl-CoA oxidase activity in males and females was not significantly different between the control groups. There was a dose-related increase in palmitoyl-CoA oxidase activity in males and females that reached significance at ≥5,000 ppm for males and ≥10,000 ppm for females (compared to both control groups). In the highest exposure groups, palmitoyl-CoA oxidase activity was ~20-fold higher than the controls. The study authors determined the NOAEL to be MPE:5,000 ppm for both sexes; based on cytoplasmic alterations in the liver and focal atrophy of seminiferous tubules (MPE=10,000 ppm and 5,000 ppm equated to 279 mg/kg-day for males). Litter effects, notably reductions in the number of live pups per litter, we

observed when dams were administered 10,000 ppm in feed.

[19] 680063: 7. In a developmental and extended exposure study as part of a group of NTP studies on phthalates, 71 pregnant female F344/N rats received feed containing 10,000 ppm of Dibutyl phthalate (DBP; purity >98%) for 7 days/week from the time pregnancy was confirmed (gestation day 0 (GD 0)) throughout gestation and lactation. The control group, which received un-dosed feed, consisted of 12 females. The authors did not report doses in mg/kg-day or provide food consumption data for dams. Pups were weaned on day 28 post-partum and selected pups (90 exposed pups/sex (not exceeding 3 pups/sex from each litter) and 15 controls pups) were placed on the same DBP or control diet as their respective dams for 4 weeks. At the conclusion of this 4-week period, the F1 offspring were maintained on 0, 2,500, 5,000, 10,000, 20,000, or 40,000 ppm DBP feed (10/sex/group) for 13 weeks (7 days/week) in an adult dietary exposure. Mean doses based on male offspring body weights and food consumption were reported to be 0, 138, 279, 571, 1,262, and 2,495 mg/kg-day. Mean doses based on female offspring body weights and food consumption were reported to be 0, 147, 294, 593, 1,182, and 2,445 mg/kg-day. The two control groups for this 13-week exposure included F1 rats that were exposed to 0 ppm DBP from gestation to the conclusion of the study (referred to as 0:0 group) and F1 rats that were exposed to 10,000 ppm DBP during gestation, lactation, and for 4 weeks post-weaning but not during the 13-week dietary exposure (referred to as MPE:0 group). Dams were observed twice daily during gestation and lactation and observations were recorded "as necessary" during gestation and weekly during lactation. Dams were also monitored for mortality. Dam body weights were recorded on GD 0 and 20 and weekly starting on lactation day (LD) 0. Total dam weight gain during gestation (GDs 0-20) and lactation (LDs 0-28) were calculated. Dam feed consumption was measured on GDs 0, 4, 7, 10, 14, 17, and 20 and twice/week during lactation. The mating index (sperm-positive females/total females), fertility index (females delivering at least one pup/sperm-positive females), gestation index (females delivering at least one live pup/sperm-positive females), and mean gestation length were recorded for each treatment group. Developmental endpoints included the sex and number of pups per litter, litter weights (PNDs 0 & 1), number and percent of live pups per litter (PND 0, 1, 4, 7, 14, 21, and 28), and pup body weights (PNDs 0, 1, 4, 7, and weekly thereafter). On day 4 post-partum, the litters were randomly culled to a maximum of eight rats/litter. At weaning, liver samples from 10 male and 10 female rats from each exposure group (0 and 10,000 ppm) were evaluated for liver weight and liver peroxisomal proliferation by measuring peroxisomal palmitoyl-CoA oxidase activity. During the post-weaning period, F1 offspring were observed twice daily, any mortality was noted, and observations were recorded on a weekly basis. Offspring body weights and feed consumption were recorded weekly. The change in F1 body weights from week 1 to week 13 of the adult dietary exposure and the final body weights relative to controls (%) were calculated. Blood for extensive hematology (10 parameters) and clinical chemistry (12 parameters) evaluations was collected from 10 rats/sex/group at the end of the 13-week feeding period. Serum samples from all male rats were saved for further analysis. The time elapsed between the end of the 13-week feeding period and sacrifice was not specified. However, the authors specify that twelve days prior to sacrifice, the vaginal vaults of 10 females/group were lavaged and the collected vaginal fluid and cells were stained to determine estrous cycle stage (estrous cycle length, percentage of time spent in the various estrous stages). At sacrifice, F1 animals were necropsied and terminal body weights were recorded. Liver, right kidney, right testis, thymus, heart, and lungs were weighed. Histologic examinations were performed on >30 organs/tissues from all F1 offspring in the control and 20,000 ppm groups. In addition, histologic examinations were performed on gross lesions, liver, and testes in the 10,000 ppm groups. Left epididymis, cauda epididymis, and testis weights, spermatid measurements (absolute and relative spermatid head count, spermatid count), and epididymal spermatozoal measurements (sperm motility, concentration) were recorded in F1 males from the control, 2,500, 10,000, and 20,000 ppm groups. Serum and testis samples from all male rats were analyzed for zinc and testosterone concentrations. Liver peroxisomal proliferation was assessed by measuring peroxisomal palmitoyl-CoA oxidase activity in the livers of five male and five female rats from each exposure group. All dams survived until scheduled sacrifice. No clinical signs observed in dams during gestation were considered to be treatment-related. Clinical signs observed during lactation were not reported. There were no statistically and biologically significant changes in dam body weight during gestation or lactation. Dam feed consumption during gestation or lactation were not reported by the authors. The mating index, fertility index, and gestation index were not significantly different between dams in the control and 10,000 ppm groups. The mean gestation length was slightly, but significantly, decreased in the 10,000 ppm group (22.00 days in control compared with 21.85 days in treated group). At birth, the number of pups per litter was not significantly different between the control and treated groups. Significant decreases in the number of live pups per litter on PNDs 1-28 (12-22%) and percentage of live pups per litter on PNDs 0-4 (8-22%) were seen compared to control. The number of mice/sex/litter and litter weights (PND 0 & 1) were not reported by the study authors. Pups in the 10,000 ppm group exhibited significantly lower body weights throughout lactation from PND 0-28, with weights 8-11% lower than the control group. At weaning, significant increases in liver weights (14% and 25%) and marked increases in peroxisomal palmitoyl-CoA oxidase activity (19-fold and 19-fold) were seen in males and females pups, respectively compared to control.. No mortality or clinical signs related to treatment were observed in F1 offspring in the 4-week post-weaning period. During the 4-week exposure period, the body weights of F1 male and female offspring in the 10,000 ppm group were significantly decreased 7-9% in males on days 8, 15, and 22 and females on days 1, 8, 15, and 22 relative to control. Total body weight gains and feed consumption were not reported for F1 offspring during the 4-week exposure. No mortality was observed during the 13-week dietary exposure of the adult F1 rats. Treatment-related clinical signs observed in the F1 rats after 13 weeks of exposure included emaciation of 40,000 ppm animals and abnormal posture, ruffled fur, hypoactivity, and a higher incidence (8/10) of nasal discharge in 40,000 ppm males. On week 1 of the 13-week exposure period, male and female body weights were significantly reduced (4-8%) in the ≥1,000 ppm groups, as compared to the 0:0 control group. By week 13, body weights were still significantly reduced (5-49%) in males at ≥2,500 ppm, while female body weights were only reduced (9-26%) at 20,000 and 40,000 ppm, compared to the unexposed 0:0 controls . In addition, in the male ≥10,000 ppm and female ≥10,000 ppm groups, body weights were significantly lower than the MPE:0 control group. In comparing the body weights of the two control groups (0:0 and MPE:0), there was a significant decrease in the MPE:0 male body weights on weeks 1 and 13 as compared to the 0:0 group. Among MPE:0 females, body weights were only significantly lower compared to 0:0 controls on week 1. Males in the ≥10,000 ppm groups and females in the ≥20,000 ppm groups gained significantly less weight from week 1 to 13 when compared to both control groups (0:0 and MPE:0). Males in the 40,000 ppm group did not gain any weight at all, and lost 7% of their body weight from week 1 to 13. DBP treatment did not significantly impact average feed consumption in F1 males and females. Notable statistically significant hematological treatment-related changes included decreases in hematocrit, hemoglobin, and erythrocytes in 10,000 and 40,000 ppm males and decreases in hematocrit and hemoglobin in 40,000 ppm females. Although statistically significant, the magnitudes of change in these metrics at 10,000 ppm in F1 males were small (<10%). Reticulocyte, platelet, and lymphocyte counts were significantly increased in F1 males exposed to 40,000 ppm DBP. On the other hand, segmented neutrophil counts were significantly decreased with DBP treatment in 40,000 ppm males. Platelet counts were also significantly higher in males of the 10,000 ppm group (as compared to MPE:0), but not in the 20,000 ppm group. Similar to F1 males, lymphocyte counts in F1 females were significantly increased at 40,000 ppm, compared to both control groups. In 40,000 ppm-exposed F1 males and 10,000 and 40,000 ppm-exposed F1 females, nucleated erythrocytes were significantly increased. There were also statistically significant treatment-related changes in mean cell volume, mean cell hemoglobin, and monocyte counts among F1 females, however, these changes were not dose-dependent or were small in magnitude (<5%). There were no other significant treatment-related changes in hematology parameters.Notable statistically and biologically relevant treatment-related changes in clinical chemistry were present in both F1 males and females. Dose-related significant decreases were observed in cholesterol levels among ≥20,000 ppm males and females and in triglyceride levels among ≥10,000 ppm males and ≥20,000 ppm females, as compared to both control groups. For female cholesterol levels, and male and female triglyceride levels, the magnitudes of decrease were larger when compared to the MPE:0 control group, as opposed to the 0:0 control group. Significant reductions in creatinine (compared to MPE:0) and creatine kinase (compared to control groups) were observed in 40,000 ppm males. Total protein was also significantly reduced with treatment, and total protein levels were lower in 40,000 ppm males and females as compared to both control groups. Alkaline phosphatase and bile acid levels exhibited significant dose-dependent increases in F1 males exposed at ≥20,000 ppm as compared to control groups. Alkaline phosphatase levels were also significantly increased, as compared to both control groups, in a dose-related manner in ≥20,000 ppm females. Bile acid levels were only increased, as compared to MPE:0 rats, in the 40,000 ppm females. Albumin levels were significantly increased in ≥10,000 ppm males and females, however, this increase was not dose related. There were significant treatment-related changes in creatinine levels among females and in alanine aminotransferase and sorbitol dehydrogenase levels among males, however, these changes were either sporadic in nature or not dose-related. There were no other significant treatment-related changes in clinical chemistry parameters. Female rat estrous cycle length and the percentages of time spent in the various estrous stages were not altered with DBP treatment. Compared to unexposed rats, male necropsy body weights were significantly decreased in a dose-responsive manner at ≥2,500 ppm, ranging from 5-50% decreased. On the other hand, when compared to control rats exposed to 10,000 ppm up until the start of the 13-week exposure period, male necropsy body weights were only significantly reduced at 20,000 ppm

(14% decreased) and 40,000 ppm (48% decreased). Female necropsy body weights were significantly and dose-dependently reduced in the 20,000 ppm (8-9%) and 40,000 ppm (27-28%) groups, as compared to both control groups. Notable statistically and biologically significant organ weight changes included dose-related increases in relative right kidney weight at ≥10,000 ppm (12-39% compared to both control groups) and relative liver weight at ≥5,000 ppm (13-76% compared to both control groups) and in F1 males, and dose-related increases in relative right kidney weights at 40,000 ppm (18% compared to 0:0 group), relative liver weights at ≥5,000 (10-75% compared to 0:0 group), and absolute liver weights at ≥10,000 ppm (15-28% compared to 0:0 group) in F1 females. Significant reductions in absolute right kidney weights were seen at 40,000 ppm (28-31% in males, 11-13% in females as compared to both control groups). Treatment-related changes in absolute liver weights and absolute and relative right testis weights were observed in males, but were not clearly dose related. In males, absolute and relative heart weights were significantly increased >10%, relative to the MPE:0 group and both control groups, respectively, at 40,000 ppm. In females, absolute lung weights were significantly decreased >10%, relative to the 0:0 group, at 40,000 ppm. Cytoplasmic alteration of the liver was present in the livers of all F1 rats at ≥10,000 ppm (not observed in either control group). These alterations included "more intensely staining eosinophilic cytoplasm and fewer small, clear vacuoles". Severity of lesions increased with increasing dose from minimal to moderate. Upon examination of ultrastructural changes, peroxisome proliferation was evident in 40,000 ppm males and females. In the testis, incidence of germinal epithelium atrophy was significantly increased at 10,000 ppm (4/10), 20,000 ppm (10/10), and 40,000 ppm (10/10); these lesions were not observed in the either control group. Severity of the lesions increased with increasing dose from minimal to marked. Hypospermia of the epididymis was observed in males exposed to ≥20,000 ppm.. The left cauda epididymal weight of MPE:0 control males was significantly greater than unexposed 0:0 control males. In general, left epididymal and cauda epididymal weights of 2,500, 10,000, and 20,000 ppm exposed males were significantly lower than the MPE:0 control males. Only at 20,000 ppm were left epididymal and cauda epididymal weights significantly reduced compared to the unexposed 0:0 control group. Treatment-related changes in left testis weights were not dose-responsive. Absolute spermatid head counts and spermatid counts were significantly reduced at 20,000 ppm as compared to the unexposed 0:0 group. Sperm motility was not altered with DBP treatment, however, sperm concentration (/g cauda epididymal tissue) was significantly reduced at 20,000 ppm compared to the MPE:0 control.Male serum zinc concentrations were significantly increased at ≥20,000 ppm as compared to the MPE:0 control group. Male serum testosterone concentrations were significantly reduced in the MPE:0 and 40,000 ppm groups as compared to the unexposed 0:0 control group. The testis zinc concentrations were significantly lower at 40,000 ppm as compared to either control group. There were no treatment-related changes in testis testosterone concentrations. Liver peroxisomal palmitoyl-CoA oxidase activity in males and females was not significantly different between the control groups. There was a dose-related increase in palmitoyl-CoA oxidase activity in males and females that reached significance at ≥5,000 ppm for males and ≥10,000 ppm for females (compared to both control groups). In the highest exposure groups, palmitoyl-CoA oxidase activity was ~20-fold higher than the controls. The study authors determined the NOAEL to be MPE:5,000 ppm for both sexes; based on cytoplasmic alterations in the liver and focal atrophy of seminiferous tubules (MPE=10,000 ppm and 5,000 ppm equated to 279 mg/kg-day for males). Litter effects, notably reductions in the number of live pups per litter, we observed when dams were administered 10,000 ppm in feed.

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Dam feed consumption was measured on GDs 0, 4, 7, 10, 14, 17, and 20 and twice/week during lactation. The mating index (sperm-positive females/total females), fertility index (females delivering at least one pup/sperm-positive females), gestation index (females delivering at least one live pup/sperm-positive females), and mean gestation length were recorded for each treatment group. Developmental endpoints included the sex and number of pups per litter, litter weights (PNDs 0 & 1), number and percent of live pups per litter (PND 0, 1, 4, 7, 14, 21, and 28), and pup body weights (PNDs 0, 1, 4, 7, and weekly thereafter). On day 4 post-partum, the litters were randomly culled to a maximum of eight rats/litter. At weaning, liver samples from 10 male and 10 female rats from each exposure group (0 and 10,000 ppm) were evaluated for liver weight and liver peroxisomal proliferation by measuring peroxisomal palmitoyl-CoA oxidase activity. During the post-weaning period, F1 offspring were observed twice daily, any mortality was noted, and observations were recorded on a weekly basis. Offspring body weights and feed consumption were recorded weekly. The change in F1 body weights from week 1 to week 13 of the adult dietary exposure and the final body weights relative to controls (%) were calculated. Blood for extensive hematology (10 parameters) and clinical chemistry (12 parameters) evaluations was collected from 10 rats/sex/group at the end of the 13-week feeding period. Serum samples from all male rats were saved for further analysis. The time elapsed between the end of the 13-week feeding period and sacrifice was not specified. However, the authors specify that twelve days prior to sacrifice, the vaginal vaults of 10 females/group were lavaged and the collected vaginal fluid and cells were stained to determine estrous cycle stage (estrous cycle length, percentage of time spent in the various estrous stages). At sacrifice, F1 animals were necropsied and terminal body weights were recorded. Liver, right kidney, right testis, thymus, heart, and lungs were weighed. Histologic examinations were performed on >30 organs/tissues from all F1 offspring in the control and 20,000 ppm groups. In addition, histologic examinations were performed on gross lesions, liver, and testes in the 10,000 ppm groups. Left epididymis, cauda epididymis, and testis weights, spermatid measurements (absolute and relative spermatid head count, spermatid count), and epididymal spermatozoal measurements (sperm motility, concentration) were recorded in F1 males from the control, 2,500, 10,000, and 20,000 ppm groups. Serum and testis samples from all male rats were analyzed for zinc and testosterone concentrations. Liver peroxisomal proliferation was assessed by measuring peroxisomal palmitoyl-CoA oxidase activity in the livers of five male and five female rats from each exposure group. All dams survived until scheduled sacrifice. No clinical signs observed in dams during gestation were considered to be treatment-related. Clinical signs observed during lactation were not reported. There were no statistically and biologically significant changes in dam body weight during gestation or lactation. Dam feed consumption during gestation or lactation were not reported by the authors. The mating index, fertility index, and gestation index were not significantly different between dams in the control and 10,000 ppm groups. The mean gestation length was slightly, but significantly, decreased in the 10,000 ppm group (22.00 days in control compared with 21.85 days in treated group). At birth, the number of pups per litter was not significantly different between the control and treated groups. Significant decreases in the number of live pups per litter on PNDs 1-28 (12-22%) and percentage of live pups per litter on PNDs 0-4 (8-22%) were seen compared to control. The number of mice/sex/litter and litter weights (PND 0 & 1) were not reported by the study authors. Pups in the 10,000 ppm group exhibited significantly lower body weights throughout lactation from PND 0-28, with weights 8-11% lower than the control group. At weaning, significant increases in liver weights (14% and 25%) and marked increases in peroxisomal palmitoyl-CoA oxidase activity (19-fold and 19-fold) were seen in males and females pups, respectively compared to control.. No mortality or clinical signs related to treatment were observed in F1 offspring in the 4-week post-weaning period. During the 4-week exposure period, the body weights of F1 male and female offspring in the 10,000 ppm group were significantly decreased 7-9% in males on days 8, 15, and 22 and females on days 1, 8, 15, and 22 relative to control. Total body weight gains and feed consumption were not reported for F1 offspring during the 4-week exposure. No mortality was observed during the 13-week dietary exposure of the adult F1 rats. Treatment-related clinical signs observed in the F1 rats after 13 weeks of exposure included emaciation of 40,000 ppm animals and abnormal posture, ruffled fur, hypoactivity, and a higher incidence (8/10) of nasal discharge in 40,000 ppm males. On week 1 of the 13-week exposure period, male and female body weights were significantly reduced (4-8%) in the ≥1,000 ppm groups, as compared to the 0:0 control group. By week 13, body weights were still significantly reduced (5-49%) in males at ≥2,500 ppm, while female body weights were only reduced (9-26%) at 20,000 and 40,000 ppm, compared to the unexposed 0:0 controls . In addition, in the male ≥10,000 ppm and female ≥10,000 ppm groups, body weights were significantly lower than the MPE:0 control group. In comparing the body weights of the two control

groups (0:0 and MPE:0), there was a significant decrease in the MPE:0 male body weights on weeks 1 and 13 as compared to the 0:0 group. Among MPE:0 females, body weights were only significantly lower compared to 0:0 controls on week 1. Males in the ≥10,000 ppm groups and females in the ≥20,000 ppm groups gained significantly less weight from week 1 to 13 when compared to both control groups (0:0 and MPE:0). Males in the 40,000 ppm group did not gain any weight at all, and lost 7% of their body weight from week 1 to 13. DBP treatment did not significantly impact average feed consumption in F1 males and females. Notable statistically significant hematological treatment-related changes included decreases in hematocrit, hemoglobin, and erythrocytes in 10,000 and 40,000 ppm males and decreases in hematocrit and hemoglobin in 40,000 ppm females. Although statistically significant, the magnitudes of change in these metrics at 10,000 ppm in F1 males were small (<10%). Reticulocyte, platelet, and lymphocyte counts were significantly increased in F1 males exposed to 40,000 ppm DBP. On the other hand, segmented neutrophil counts were significantly decreased with DBP treatment in 40,000 ppm males. Platelet counts were also significantly higher in males of the 10,000 ppm group (as compared to MPE:0), but not in the 20,000 ppm group. Similar to F1 males, lymphocyte counts in F1 females were significantly increased at 40,000 ppm, compared to both control groups. In 40,000 ppm-exposed F1 males and 10,000 and 40,000 ppm-exposed F1 females, nucleated erythrocytes were significantly increased. There were also statistically significant treatment-related changes in mean cell volume, mean cell hemoglobin, and monocyte counts among F1 females, however, these changes were not dose-dependent or were small in magnitude (<5%). There were no other significant treatment-related changes in hematology parameters.Notable statistically and biologically relevant treatment-related changes in clinical chemistry were present in both F1 males and females. Dose-related significant decreases were observed in cholesterol levels among ≥20,000 ppm males and females and in triglyceride levels among ≥10,000 ppm males and ≥20,000 ppm females, as compared to both control groups. For female cholesterol levels, and male and female triglyceride levels, the magnitudes of decrease were larger when compared to the MPE:0 control group, as opposed to the 0:0 control group. Significant reductions in creatinine (compared to MPE:0) and creatine kinase (compared to control groups) were observed in 40,000 ppm males. Total protein was also significantly reduced with treatment, and total protein levels were lower in 40,000 ppm males and females as compared to both control groups. Alkaline phosphatase and bile acid levels exhibited significant dose-dependent increases in F1 males exposed at ≥20,000 ppm as compared to control groups. Alkaline phosphatase levels were also significantly increased, as compared to both control groups, in a dose-related manner in ≥20,000 ppm females. Bile acid levels were only increased, as compared to MPE:0 rats, in the 40,000 ppm females. Albumin levels were significantly increased in ≥10,000 ppm males and females, however, this increase was not dose related. There were significant treatment-related changes in creatinine levels among females and in alanine aminotransferase and sorbitol dehydrogenase levels among males, however, these changes were either sporadic in nature or not dose-related. There were no other significant treatment-related changes in clinical chemistry parameters. Female rat estrous cycle length and the percentages of time spent in the various estrous stages were not altered with DBP treatment. Compared to unexposed rats, male necropsy body weights were significantly decreased in a dose-responsive manner at ≥2,500 ppm, ranging from 5-50% decreased. On the other hand, when compared to control rats exposed to 10,000 ppm up until the start of the 13-week exposure period, male necropsy body weights were only significantly reduced at 20,000 ppm (14% decreased) and 40,000 ppm (48% decreased). Female necropsy body weights were significantly and dose-dependently reduced in the 20,000 ppm (8-9%) and 40,000 ppm (27-28%) groups, as compared to both control groups. Notable statistically and biologically significant organ weight changes included dose-related increases in relative right kidney weight at ≥10,000 ppm (12-39% compared to both control groups) and relative liver weight at ≥5,000 ppm (13-76% compared to both control groups) and in F1 males, and dose-related increases in relative right kidney weights at 40,000 ppm (18% compared to 0:0 group), relative liver weights at ≥5,000 (10-75% compared to 0:0 group), and absolute liver weights at ≥10,000 ppm (15-28% compared to 0:0 group) in F1 females. Significant reductions in absolute right kidney weights were seen at 40,000 ppm (28-31% in males, 11-13% in females as compared to both control groups). Treatment-related changes in absolute liver weights and absolute and relative right testis weights were observed in males, but were not clearly dose related. In males, absolute and relative heart weights were significantly increased >10%, relative to the MPE:0 group and both control groups, respectively, at 40,000 ppm. In females, absolute lung weights were significantly decreased >10%, relative to the 0:0 group, at 40,000 ppm. Cytoplasmic alteration of the liver was present in the livers of all F1 rats at ≥10,000 ppm (not observed in either control group). These alterations included “more intensely staining eosinophilic cytoplasm and fewer small, clear vacuoles”. Severity of lesions increased with increasing dose from minimal to moderate. Upon examination of ultrastructural changes, peroxisome proliferation was evident in 40,000 ppm males and females. In the testis, incidence of germinal epithelium atrophy was significantly increased at 10,000 ppm (4/10), 20,000 ppm (10/10), and 40,000 ppm (10/10); these lesions were not observed in the either control group. Severity of the lesions increased with increasing dose from minimal to marked. Hypospermia of the epididymis was observed in males exposed to ≥20,000 ppm.. The left cauda epididymal weight of MPE:0 control males was significantly greater than unexposed 0:0 control males. In general, left epididymal and cauda epididymal weights of 2,500, 10,000, and 20,000 ppm exposed males were significantly lower than the MPE:0 control males. Only at 20,000 ppm were left epididymal and cauda epididymal weights significantly reduced compared to the unexposed 0:0 control group. Treatment-related changes in left testis weights were not dose-responsive. Absolute spermatid head counts and spermatid counts were significantly reduced at 20,000 ppm as compared to the unexposed 0:0 group. Sperm motility was not altered with DBP treatment, however, sperm concentration (/g cauda epididymal tissue) was significantly reduced at 20,000 ppm compared to the MPE:0 control.Male serum zinc concentrations were significantly increased at ≥20,000 ppm as compared to the MPE:0 control group. Male serum testosterone concentrations were significantly reduced in the MPE:0 and 40,000 ppm groups as compared to the unexposed 0:0 control group. The testis zinc concentrations were significantly lower at 40,000 ppm as compared to either control group. There were no treatment-related changes in testis testosterone concentrations. Liver peroxisomal palmitoyl-CoA oxidase activity in males and females was not significantly different between the control groups. There was a dose-related increase in palmitoyl-CoA oxidase activity in males and females that reached significance at ≥5,000 ppm for males and ≥10,000 ppm for females (compared to both control groups). In the highest exposure groups, palmitoyl-CoA oxidase activity was ~20-fold higher than the controls. The study authors determined the NOAEL to be MPE:5,000 ppm for both sexes; based on cytoplasmic alterations in the liver and focal atrophy of seminiferous tubules (MPE=10,000 ppm and 5,000 ppm equated to 279 mg/kg-day for males). Litter effects, notably reductions in the number of live pups per litter, we observed when dams were administered 10,000 ppm in feed.

[21] 680063: 7. In a developmental and extended exposure study as part of a group of NTP studies on phthalates, 71 pregnant female F344/N rats received feed containing 10,000 ppm of Dibutyl phthalate (DBP; purity >98%) for 7 days/week from the time pregnancy was confirmed (gestation day 0 (GD 0)) throughout gestation and lactation. The control group, which received un-dosed feed, consisted of 12 females. The authors did not report doses in mg/kg-day or provide food consumption data for dams. Pups were weaned on day 28 post-partum and selected pups (90 exposed pups/sex (not exceeding 3 pups/sex from each litter) and 15 controls pups) were placed on the same DBP or control diet as their respective dams for 4 weeks. At the conclusion of this 4-week period, the F1 offspring were maintained on 0, 2,500, 5,000, 10,000, 20,000, or 40,000 ppm DBP feed (10/sex/group) for 13 weeks (7 days/week) in an adult dietary exposure. Mean doses based on male offspring body weights and food consumption were reported to be 0, 138, 279, 571, 1,262, and 2,495 mg/kg-day. Mean doses based on female offspring body weights and food consumption were reported to be 0, 147, 294, 593, 1,182, and 2,445 mg/kg-day. The two control groups for this 13-week exposure included F1 rats that were exposed to 0 ppm DBP from gestation to the conclusion of the study (referred to as 0:0 group) and F1 rats that were exposed to 10,000 ppm DBP during gestation, lactation, and for 4 weeks post-weaning but not during the 13-week dietary exposure (referred to as MPE:0 group). Dams were observed twice daily during gestation and lactation and observations were recorded “as necessary” during gestation and weekly during lactation. Dams were also monitored for mortality. Dam body weights were recorded on GD 0 and 20 and weekly starting on lactation day (LD) 0. Total dam weight gain during gestation (GDs 0-20) and lactation (LDs 0-28) were calculated. Dam feed consumption was measured on GDs 0, 4, 7, 10, 14, 17, and 20 and twice/week during lactation. The mating index (sperm-positive females/total females), fertility index (females delivering at least one pup/sperm-positive females), gestation index (females delivering at least one live pup/sperm-positive females), and mean gestation length were recorded for each treatment group. Developmental endpoints included the sex and number of pups per litter, litter weights (PNDs 0 & 1), number and percent of live pups per litter (PND 0, 1, 4, 7, 14, 21, and 28), and pup body weights (PNDs 0, 1, 4, 7, and weekly thereafter). On day 4 post-partum, the litters were randomly culled to a maximum of eight rats/litter. At weaning, liver samples from 10 male and 10 female rats from each exposure group (0 and 10,000 ppm) were evaluated for liver weight and liver peroxisomal proliferation by measuring peroxisomal palmitoyl-CoA oxidase activity. During the post-weaning period, F1 offspring were observed twice daily, any mortality was noted, and observations were recorded on a weekly basis. Offspring body weights and feed consumption were recorded weekly. The change in F1 body weights from week 1 to week 13 of the adult dietary exposure and the final body weights relative to controls (%) were calculated. Blood for extensive hematology (10 parameters) and clinical chemistry (12 parameters) evaluations was collected from 10 rats/sex/group at the end of the 13-week feeding period. Serum samples from all male rats were saved for further analysis.

The time elapsed between the end of the 13-week feeding period and sacrifice was not specified. However, the authors specify that twelve days prior to sacrifice, the vaginal vaults of 10 females/group were lavaged and the collected vaginal fluid and cells were stained to determine estrous cycle stage (estrous cycle length, percentage of time spent in the various estrous stages). At sacrifice, F1 animals were necropsied and terminal body weights were recorded. Liver, right kidney, right testis, thymus, heart, and lungs were weighed. Histologic examinations were performed on >30 organs/tissues from all F1 offspring in the control and 20,000 ppm groups. In addition, histologic examinations were performed on gross lesions, liver, and testes in the 10,000 ppm groups. Left epididymis, cauda epididymis, and testis weights, spermatid measurements (absolute and relative spermatid head count, spermatid count), and epididymal spermatozoal measurements (sperm motility, concentration) were recorded in F1 males from the control, 2,500, 10,000, and 20,000 ppm groups. Serum and testis samples from all male rats were analyzed for zinc and testosterone concentrations. Liver peroxisomal proliferation was assessed by measuring peroxisomal palmitoyl-CoA oxidase activity in the livers of five male and five female rats from each exposure group. All dams survived until scheduled sacrifice. No clinical signs observed in dams during gestation were considered to be treatment-related. Clinical signs observed during lactation were not reported. There were no statistically and biologically significant changes in dam body weight during gestation or lactation. Dam feed consumption during gestation or lactation were not reported by the authors. The mating index, fertility index, and gestation index were not significantly different between dams in the control and 10,000 ppm groups. The mean gestation length was slightly, but significantly, decreased in the 10,000 ppm group (22.00 days in control compared with 21.85 days in treated group). At birth, the number of pups per litter was not significantly different between the control and treated groups. Significant decreases in the number of live pups per litter on PNDs 1-28 (12-22%) and percentage of live pups per litter on PNDs 0-4 (8-22%) were seen compared to control. The number of mice/sex/litter and litter weights (PND 0 & 1) were not reported by the study authors. Pups in the 10,000 ppm group exhibited significantly lower body weights throughout lactation from PND 0-28, with weights 8-11% lower than the control group. At weaning, significant increases in liver weights (14% and 25%) and marked increases in peroxisomal palmitoyl-CoA oxidase activity (19-fold and 19-fold) were seen in males and females pups, respectively compared to control.. No mortality or clinical signs related to treatment were observed in F1 offspring in the 4-week post-weaning period. During the 4-week exposure period, the body weights of F1 male and female offspring in the 10,000 ppm group were significantly decreased 7-9% in males on days 8, 15, and 22 and females on days 1, 8, 15, and 22 relative to control. Total body weight gains and feed consumption were not reported for F1 offspring during the 4-week exposure. No mortality was observed during the 13-week dietary exposure of the adult F1 rats. Treatment-related clinical signs observed in the F1 rats after 13 weeks of exposure included emaciation of 40,000 ppm animals and abnormal posture, ruffled fur, hypoactivity, and a higher incidence (8/10) of nasal discharge in 40,000 ppm males. On week 1 of the 13-week exposure period, male and female body weights were significantly reduced (4-8%) in the ≥1,000 ppm groups, as compared to the 0:0 control group. By week 13, body weights were still significantly reduced (5-49%) in males at ≥2,500 ppm, while female body weights were only reduced (9-26%) at 20,000 and 40,000 ppm, compared to the unexposed 0:0 controls . In addition, in the male ≥10,000 ppm and female ≥10,000 ppm groups, body weights were significantly lower than the MPE:0 control group. In comparing the body weights of the two control groups (0:0 and MPE:0), there was a significant decrease in the MPE:0 male body weights on weeks 1 and 13 as compared to the 0:0 group. Among MPE:0 females, body weights were only significantly lower compared to 0:0 controls on week 1. Males in the ≥10,000 ppm groups and females in the ≥20,000 ppm groups gained significantly less weight from week 1 to 13 when compared to both control groups (0:0 and MPE:0). Males in the 40,000 ppm group did not gain any weight at all, and lost 7% of their body weight from week 1 to 13. DBP treatment did not significantly impact average feed consumption in F1 males and females. Notable statistically significant hematological treatment-related changes included decreases in hematocrit, hemoglobin, and erythrocytes in 10,000 and 40,000 ppm males and decreases in hematocrit and hemoglobin in 40,000 ppm females. Although statistically significant, the magnitudes of change in these metrics at 10,000 ppm in F1 males were small (<10%). Reticulocyte, platelet, and lymphocyte counts were significantly increased in F1 males exposed to 40,000 ppm DBP. On the other hand, segmented neutrophil counts were significantly decreased with DBP treatment in 40,000 ppm males. Platelet counts were also significantly higher in males of the 10,000 ppm group (as compared to MPE:0), but not in the 20,000 ppm group. Similar to F1 males, lymphocyte counts in F1 females were significantly increased at 40,000 ppm, compared to both control groups. In 40,000 ppm-exposed F1 males and 10,000 and 40,000 ppm-exposed F1 females, nucleated erythrocytes were significantly increased. There were also statistically significant treatment-related changes in mean cell volume, mean cell hemoglobin, and monocyte counts among F1 females, however, these changes were not dose-dependent or were small in magnitude (<5%). There were no other significant treatment-related changes in hematology parameters.Notable statistically and biologically relevant treatment-related changes in clinical chemistry were present in both F1 males and females. Dose-related significant decreases were observed in cholesterol levels among ≥20,000 ppm males and females and in triglyceride levels among ≥10,000 ppm males and ≥20,000 ppm females, as compared to both control groups. For female cholesterol levels, and male and female triglyceride levels, the magnitudes of decrease were larger when compared to the MPE:0 control group, as opposed to the 0:0 control group. Significant reductions in creatinine (compared to MPE:0) and creatine kinase (compared to control groups) were observed in 40,000 ppm males. Total protein was also significantly reduced with treatment, and total protein levels were lower in 40,000 ppm males and females as compared to both control groups. Alkaline phosphatase and bile acid levels exhibited significant dose-dependent increases in F1 males exposed at ≥20,000 ppm as compared to control groups. Alkaline phosphatase levels were also significantly increased, as compared to both control groups, in a dose-related manner in ≥20,000 ppm females. Bile acid levels were only increased, as compared to MPE:0 rats, in the 40,000 ppm females. Albumin levels were significantly increased in ≥10,000 ppm males and females, however, this increase was not dose related. There were significant treatment-related changes in creatinine levels among females and in alanine aminotransferase and sorbitol dehydrogenase levels among males, however, these changes were either sporadic in nature or not dose-related. There were no other significant treatment-related changes in clinical chemistry parameters. Female rat estrous cycle length and the percentages of time spent in the various estrous stages were not altered with DBP treatment. Compared to unexposed rats, male necropsy body weights were significantly decreased in a dose-responsive manner at ≥2,500 ppm, ranging from 5-50% decreased. On the other hand, when compared to control rats exposed to 10,000 ppm up until the start of the 13-week exposure period, male necropsy body weights were only significantly reduced at 20,000 ppm (14% decreased) and 40,000 ppm (48% decreased). Female necropsy body weights were significantly and dose-dependently reduced in the 20,000 ppm (8-9%) and 40,000 ppm (27-28%) groups, as compared to both control groups. Notable statistically and biologically significant organ weight changes included dose-related increases in relative right kidney weight at ≥10,000 ppm (12-39% compared to both control groups) and relative liver weight at ≥5,000 ppm (13-76% compared to both control groups) and in F1 males, and dose-related increases in relative right kidney weights at 40,000 ppm (18% compared to 0:0 group), relative liver weights at ≥5,000 (10-75% compared to 0:0 group), and absolute liver weights at ≥10,000 ppm (15-28% compared to 0:0 group) in F1 females. Significant reductions in absolute right kidney weights were seen at 40,000 ppm (28-31% in males, 11-13% in females as compared to both control groups). Treatment-related changes in absolute liver weights and absolute and relative right testis weights were observed in males, but were not clearly dose related. In males, absolute and relative heart weights were significantly increased >10%, relative to the MPE:0 group and both control groups, respectively, at 40,000 ppm. In females, absolute lung weights were significantly decreased >10%, relative to the 0:0 group, at 40,000 ppm. Cytoplasmic alteration of the liver was present in the livers of all F1 rats at ≥10,000 ppm (not observed in either control group). These alterations included “more intensely staining eosinophilic cytoplasm and fewer small, clear vacuoles”. Severity of lesions increased with increasing dose from minimal to moderate. Upon examination of ultrastructural changes, peroxisome proliferation was evident in 40,000 ppm males and females. In the testis, incidence of germinal epithelium atrophy was significantly increased at 10,000 ppm (4/10), 20,000 ppm (10/10), and 40,000 ppm (10/10); these lesions were not observed in the either control group. Severity of the lesions increased with increasing dose from minimal to marked. Hypospermia of the epididymis was observed in males exposed to ≥20,000 ppm.. The left cauda epididymal weight of MPE:0 control males was significantly greater than unexposed 0:0 control males. In general, left epididymal and cauda epididymal weights of 2,500, 10,000, and 20,000 ppm exposed males were significantly lower than the MPE:0 control males. Only at 20,000 ppm were left epididymal and cauda epididymal weights significantly reduced compared to the unexposed 0:0 control group. Treatment-related changes in left testis weights were not dose-responsive. Absolute spermatid head counts and spermatid counts were significantly reduced at 20,000 ppm as compared to the unexposed 0:0 group. Sperm motility was not altered with DBP treatment, however, sperm concentration (/g cauda epididymal tissue) was significantly reduced at 20,000 ppm compared to the MPE:0 control.Male serum zinc concentrations were significantly increased at ≥20,000 ppm as compared to the MPE:0 control group. Male serum testosterone concentrations were significantly reduced in the MPE:0 and 40,000 ppm groups as compared to the unexposed 0:0 control group. The testis zinc concentrations were significantly lower at 40,000 ppm as compared to either control group. There were no treatment-related changes in testis testosterone concentrations. Liver peroxisomal palmitoyl-CoA oxidase activity in males and females was not significantly different between the control groups. There was a dose-related increase in palmitoyl-CoA oxidase activity in males and females that reached significance at ≥5,000 ppm for males and ≥10,000 ppm for females (compared to both control groups). In the highest exposure groups, palmitoyl-CoA oxidase activity was ~20-fold higher than the controls. The study authors determined the NOAEL to be MPE:5,000 ppm for both sexes; based on

cytoplasmic alterations in the liver and focal atrophy of seminiferous tubules (MPE=10,000 ppm and 5,000 ppm equated to 279 mg/kg-day for males). Litter effects, notably reductions in the number of live pups per litter, we observed when dams were administered 10,000 ppm in feed.

[22] 680063: 10.DBP Continuous breeding study in rats. A continuous breeding study with crossover mating and offspring assessment phases was briefly described (HERO 680063). Additional details are found in the final study report (HERO ID 1333020, and some of the data are also in a published study (HERO 673328). Following a 2-week dose-range finding study, VAF Crl:CD BR outbred Sprague-Dawley rats (20 breeding pairs/treatment group; 40 control breeding pairs) began exposure to DBP (>98% pure) concentrations of 0, 1,000, 5,000, or 10,000 ppm (equivalent to average doses of ~ 66, 320, and 651 mg/kg-day as reported in HERO ID 1333020) in feed one week prior to cohabitation. F0 animals were then co-housed for 16-weeks (112 days) for the generation of five litters (F1a through F1e). F0 males and females were then separated and were continued on the exposure diets through delivery and weaning of the final litter. Continuous breeding endpoints evaluated included mortality, clinical signs of toxicity, body weights, feed consumption, fertility, number of litters per pair, number of live pups per litter, proportion of pups born alive, sex ratio, and pup body weights at birth. F1e litter pup number and body weights were collected during lactation. At weaning, F1e offspring continued on the same exposure diets as their parents. Estimated doses in mg/kg-day (reported in HERO 1333020) were 50, 247, and 498 mg/kg-day for males and 83, 397, and 828 mg/kg-day for females. At sexual maturity (~77 days) 20 non-sibling F1e pairs from the same exposure group were cohoused for 7 days. Animals were separated upon confirmation of a pregnancy and were allowed to deliver F2 pups. Endpoints evaluated for this part of the study includes monitoring F1e adults for mortality, clinical signs, body weights, feed consumption fertility, number of pairs delivering a litter, and then number of F2 pups per litter, proportion of pups born alive, sex ratio, and pup body weights. Twelve days prior to necropsy sperm morphology and vaginal cytology evaluations were made on parental F1e animals. At necropsy organ weights (kidney, liver, right cauda epididymis, right epididymis, right testis, prostate gland, seminal vesicles, and right ovary were recorded and select tissues were fixed for histopathology. After weaning of the F5 litter, cross over mating trials were conducted with the F0 adults (20 pairs per group). Group 1) control males x control females, Group 2) control males x 10,000 ppm females, Group 3) 10,000 ppm males x control females. The average daily intakes were reported in HERO 1333020 to be 410 and 665 mg/kg-day during the cross-over trials in males and females, respectively. The pairs were cohabitated for 7 days or until a vaginal plug or sperm in lavage fluid were noted. Crossover trial endpoints evaluated included mortality, clinical signs of toxicity, body weights, pregnancy and fertility endpoints, feed consumption, and litter data. Estrous cyclicity was evaluated prior to necropsy. At necropsy, liver, kidney, right epididymis, cauda epididymis, testis, and ovary, prostate gland, and seminal vesicles were weighed. Select tissues were fixed for histopathology. Continuous breeding results: One F0 male and one F0 female in the 5,000 ppm group were killed in extremis for reasons unrelated to exposure. On the day of each litter delivery (delivery of F1a-F1e), F0 dam body weights were significantly decreased at 10,000 ppm; at the end of the continuous breeding phase (~17 weeks of exposure), F0 female body weights were decreased 11%, compared with controls. The decrease was maintained throughout lactation of the final litter. In the lower dose groups, there were significant decreases in F0 dam body weights on lactation day 21 at ≥1,000 ppm and on lactation days 14 and 21 at ≥ 5,000 ppm, respectively; however, the magnitudes of change were small (<10%). Male body weights were always within 10% of controls. F0 dam food intake was significantly decreased by 18% and 8% during weeks 1 and 6 at 10,000 ppm, compared with controls (HERO 1333050). Male food intake was also lower, but to a lesser degree. The number of litters per pair and cumulative days to litter were comparable across groups for all litters. However, there was a dose-related decrease in the number of live male and female pups per litter becoming significant at ≥ 5,000 ppm. When male and female pups are combined, the number of live pups per litter was significantly reduced at ≥1,000 ppm (see HERO 1333020). The ratio of live male pups to live pups was significantly decreased in litters 1 and 3 from the high-dose group. Male pup body weights were significantly decreased at ≥5,000 ppm in 3/5 litters, and female pup body weights were decreased at 10,000 ppm in 5/5 litters. Similar decreases in total and adjusted live pup weights at 10,000 ppm (all litters) and adjusted liver pup weights at 5,000 ppm (4/5 litters) were also significant. F1e male and female offspring body weights in the 10,000 ppm group were significantly reduced, compared with controls, through PND 21 (reductions of 16 and 12% for male and female pups, respectively). Offspring assessment phase: No deaths or clinical signs of toxicity were observed. Mean body weights of 10,000 ppm F1e offspring selected for breeding were significantly reduced at weaning (15% males, 7% females). The female body weights were reported to remain less throughout breeding but were comparable to controls at the time of the delivery of F2 litters. Food consumption in 10,000 ppm animals was also significantly decreased during the week of breeding. Necropsy body weight and organ weight measurements in F1e breeders showed significant decreases in male (8%) and female (13%) necropsy weights, and exposure-related decreases in absolute and relative prostate gland, seminal vesicle, right testis, epididymis, and cauda epididymis in 10,000 ppm males. Right absolute ovary weights in high-dose females were significantly lower than controls. Significant liver and kidney weight changes in both sexes (relative, but not absolute in males, and absolute, but not relative in females) at 10,000 ppm were directionally inconsistent and are likely secondary to body weight changes. The number of spermatid heads/testis was significantly decreased in F1e males at 10,000 ppm compared to control. No differences in the percentage of motile sperm, abnormal sperm, or concentration of spermatozoa/cauda epididymal tissue were seen. No difference in estrous cycle were seen in female F1e. Increased incidence of seminiferous tubules degeneration (8/10) and interstitial cell hyperplasia (7/10) were seen in the testis at 10,000 ppm compared to 1/10 in the control males; severity of these lesions were mild to moderate. Underdeveloped epididymis and defective epididymis were seen in 5/10 F1 males with moderate severity compared to 0/10 in the control.Mating, pregnancy, and fertility indices in the 10,000 ppm group were significantly less than controls and only a single F2 litter was produced. Significant decreases in F2 female pup weight (7%), total live pup weight (6%), and adjusted live pup weight (5% and 8%) were observed at 1,000 and 5,000 ppm. Data were not statistically analyzed for the 10,000 ppm group due to the delivery of only a single litter, but weights were also less than controls. Crossover mating results: One control female and one female in the 10,000 ppm died; the deaths were not attributed to exposure and no clinical signs of toxicity were noted. Necropsy weight of 10,000 ppm females were significantly decreased 14%, relative to controls. At sacrifice, significant organ weight changes between treated F0 male rats (Group 3) and controls included increased absolute (11%) and relative (15%) liver weights, increased relative (11%), but not absolute kidney weights, and a 25% increase in mean relative weights of the right cauda epididymis. In F0 treated females (Group 2), relative, but not absolute liver weights were significantly increased (14%). A slight, but significant increase in relative kidney weights were also observed, but the magnitude of change was small (<10%). Sperm parameters and estrous cycle lengths were not affected by treatment. No significant differences in mating, pregnancy, fertility indices, or number of days to litter were observed. Body weights of Group 2 females (exposed to 10,000 ppm) were significantly decreased, compared with controls, during breeding. Adjusted live pup weights were also decreased (11%) in the same group. No author-reported toxicity values were provided. Based on the data provided, a LOAEL of 1,000 ppm in food (the lowest exposure level) was identified for this continuous breeding/crossover mating study, based on statistically significant decreases in F0 dam body weights during lactation, in the number of combined (M+F) live pups per litter, and in F2 female pup weights, total live pup weights, and adjusted live pup weights. A NOAEL was not identified.

[23] 680063: 11.DBP Continuous breeding study in mice. A continuous breeding study with crossover mating and offspring assessment phases was briefly described (HERO 680063). Additional details are found in the final study report (HERO ID 061570), and in a published study (HERO 061566). COBS CD-1 (ICR)BR outbred Swiss albino mice (20 breeding pairs/treatment group; 40 control breeding pairs) began exposure to DBP (>99% pure) concentrations of 0, 300, 3,000 or 10,000 ppm in feed one week prior to cohabitation. F0 animals were then co-housed for 14-weeks (98 days) for the generation of F1a-F1e litters. F0 males and females were then separated and were continued on the exposure diets through delivery and weaning of the final litter. Continuous breeding endpoints evaluated included mortality, clinical signs of toxicity, body weights, feed consumption, fertility, number of litters per pair, number of live pups per litter, proportion of pups born alive, sex ratio, and pup body weights at birth. After weaning of the F1e litter cross over mating trials were conducted with the F0 adults (19 pairs per group). Group 1) control males x control females, Group 2) control males x 10,000 ppm females, Group 3) 10,000 ppm males x control females. The pairs were cohabitated for 7 days or until a vaginal plug or sperm in lavage fluid were noted. Crossover trial endpoints evaluated included mortality, clinical signs of toxicity, body weights, pregnancy and fertility endpoints, and litter data. Estrous cyclicity was evaluated prior to necropsy. At necropsy, brain, liver, pituitary gland, epididymides, prostate gland, seminal vesicles, ovaries with oviducts, and uterus were weighed. Continuous breeding results: One control male died prior to mating and one male and one female in the 3,000 ppm group died during the continuous breeding phase. Body weights and feed consumption were comparable to controls. The fertility index was significantly decreased at 10,000 ppm (75% vs. 100% in controls). Additionally, the numbers of litters per pair, live male, female, and combined pups per litter, and proportion of pups born alive were all significantly reduced at the highest dose. There were five

mating pairs at 10,000 ppm that had dead pups only. The ratio of live male pups to live pups was significantly increased, and adjusted live, but not live male pup weights were decreased 8% at 10,000 ppm. Crossover mating results: No deaths in parental animals were observed during the crossover mating trial. Necropsy weights of Group 3 exposed males were significantly decreased (9%); final female body weights were comparable to controls. There was a significant 11% increase in relative, but not absolute male liver weights. In Group 2 exposed females, both absolute (17%) and relative (19%) liver weights were significantly increased, and absolute and relative uterus weights were decreased, compared with controls. Sperm parameters and estrous cyclicity was comparable across groups. No treatment-related histopathologic lesions were observed. In Group 2 (females exposed to 10,000ppm x control males), the number of fertile females/the number cohabitated was significantly decreased, and the fertility index in this group was 21%, compared with 74% in controls. Specifically, two dams in the 10,000 ppm group delivered a single live pup; one dam delivered one live and one dead pup, and one delivered only one dead pup. There were also significant decreases in Group 2 numbers of male, female, and total pups per litter, percentage of live pups per litter, and in combined pup weights, and adjusted male, female, and combined live pup weights, compared with controls. The only significant change in Group 3 litters was a significant decrease female live pup weight; however, since one litter had no female live pups, once adjusted, no changes were observed. Based on these results, it was determined by the study authors that high-dose females were the affected sex. No author-reported toxicity values were provided. Based on the information available, a NOAEL of 3,000 ppm and a LOAEL of 10,000 ppm DBP in feed was determined for this review based on effects on reproduction and fertility.

[24] 1639195: Female and male C57BL/6 mice were housed together until pregnancy was determined (criteria not reported). Presumed pregnant dams were monitored daily until day of birth (designated as day 0). Litters, consisting of 5-10 pups, were randomly assigned to treatment group (not reported how many litters made up one dose group). Male pups were administered 0, 1, 10, 50, 100, 250, or 500 mg/kg/day di-n-butyl phthalate (DBP) in corn oil via gavage from postnatal day (PND) 4 -21. Offspring were sacrificed on PND 7 (0, 1, 10, 100 or 500 mg/kg/day) and PND 14 (0, 1, 10, 50, 100, 250, or 500 mg/kg/day) or 8 weeks after last dose was administered (0, 1, 10, 100 or 500 mg/kg/day). Endpoints evaluated on PND7 and 14 included body weight, gross morphology of testis, organ weight (testis, spleen, kidney, liver, and heart), serum FSH, inhibin and testosterone levels, anogenital distance, level of proliferation or Sertoli cells (PCNA staining), and apoptosis in testes (cleaved caspase 3 and TUNEL staining, respectively), development of Sertoli cells (PND 14; via immunohistochemistry and Western blot for SOX9 and AMH) . The adult mice treated until PND 21 were maintained for an additional 5 weeks without treatment and sacrificed at week 8. Endpoints evaluated at week 8 sacrifices included serum levels of FSH, inhibin, and testosterone, anogenital distance (AGD), organ weights (testis, spleen, kidney, liver, and heart). In adult mice (8 weeks after last dose) endpoints examined included body weight, organ weight (epididymis, testis, spleen, kidney, liver, and heart), AGD, histopathology on testes. AGD was measure in female pups on PND 14.Body weight gain in pups receiving 500 mg/kg/day was decreased during the first 24 hours (5% compared to 16-21.5% in other groups; data not shown); however, by PND 7 and 14 no significant differences in body weights were seen between the groups (data not shown). No significant difference in serum FSH was seen on PND7 or PND 14 compared to control (only 100, 250 and 500 mg/kg/day shown for PND 14). On PND 14, serum inhibin was significantly increased 20% in the 500 mg/kg/day group, compared to control. Level of serum inhibin relative to testis weight was significantly increased (~30%, 35%, and 108%) at 100, 250, and 500 mg/kg/day, compared to control. Serum testosterone was significantly decreased (~55%) at 500 mg/kg/day on PND 14, compared to control. Relative testis weight was significantly decreased on PND 7 in the 500 mg/kg/day group (~75%) and on PND 14 at $\geq$ 50 mg/kg/day, compared to control (cannot determine magnitude based on confusing labeling of axis). Relative testis weight analyzed as litter averages showed a dose-dependent effect. No significant difference in organ weights were seen. At PND 14, significantly decreases in AGD was seen (14-19%) at $\geq$ 50 mg/kg/day, however AGD relative to body weight was decreased only at 500 mg/kg/day (18%) compared to control. Significant decreases in AGD relative to trunk length was seen (11-31%) at $\geq$ 1 mg/kg/day compared to control. No significant difference in trunk length was seen compared to control. In the 500 mg/kg/day group on PND7, the number of proliferating Sertoli cells was significantly decreased by ~50%, compared to control. No significant difference in apoptosis was seen in tests (caspase 3-positive cells and TUNEL positive cells) at PND 7 compared to control. On PND 14, Sertoli cell development and maturation was impaired. Substantial Sertoli cell disorganization was seen in assessed as significantly more cords/tubules (~23% and 25% of tubules) at 100 and 500 mg/kg/day, respectively compared to control (9%). Also, the tubule to cord ratio was significant decreased (~70%) compared to control, suggesting delay and/or disturbance in Sertoli cell polarization. The number of immature Sertoli cells were substantially increased (increased AMH and Cx43 cells positive cells) at$\geq$ 10 mg/kg/day at PND 14 compared to control. On PND 14, spermatogenesis was delayed as determined by a significant increase in cords containing spermatogonia (~12%) and in preleptotene-zygotene spermatocytes (~18%) at 500 mg/kg/day, compared to control; and a significant decrease in the percentage of cords containing pachytene spermatocytes (~3%, 4%, and 1%) at 10, 100, and 500 mg/kg/day, respectively compared to control (13%). Inhibin-a subunit was increased in the testis at $\geq$1 mg/kg/day, assessed by immunohistochemistry, data not quantified. No significant change in mRNA or protein expression of AR protein was seen at PND 14 in the testes compared to control on PND 14. In adult males at week 8, relative testis body weight ration was significantly reduced (17%) at 500 mg/kg/day compared to control. Relative epididymis weight was not significantly different from control. Significant decreases in AGD distances in adult mice were significantly decreased (~13%) at $\geq$1 mg/kg/day, ADGD relative to body weight (~18%) at 1 and 500 mg/kg/day, and AGD compared to trunk length (~16%) at $\geq$1 mg/kg/day compared to control. No significant difference in body weights or trunk length were seen in any group compared to control. Histological examination of adult testis showed unusual germ cell loss in all treated animals (either premeiotic/meiotic germ cells were absent, post meiotic germ cells were absent, or partial spermatogenesis). Full spermatogenesis was evident in the testes of all animals. Epididymal histology was overtly normal in all treated groups (data not shown).DBP impairs prepubertal Sertoli cell development and first wave of spermatogenesis. A LOAEL of 1 mg/kg/day was determined based on decreased AGD and disrupted spermatogenesis.

[25] 673305: Groups of pregnant Sprague Dawley rats (20/group, 11/group at the high dose) were administered DBP (purity 99%) via gavage in corn oil at doses of 0 (vehicle control), 0.5, 5, 50, 100, or 500 mg/kg/day during gestation days GD 12-21. Offspring was weaned on PND21. Dams were evaluated for clinical signs of toxicity, body weights, weight gain, and food consumption throughout the study, for implantation sites, live and dead pups after delivery and euthanized the day following weaning for gross necropsy (including implantation sites) and evaluation of organ weights (liver, kidney, adrenal gland, uterus, and ovaries). On the day of delivery (PND1), pups were evaluated for number of live and dead pups, clinical signs of toxicity, pup weights, and anogenital distance (AGD). On PND 14 male offspring were examined for location and number of nipples and areolae. At weaning, offspring were separated by sex and examined daily for vaginal opening or preputial separation. Once offspring reached sexual maturity, (PND 110 for males and PND80 for females) body weights were taken, external genitalia were examined for malformations, and animals were sacrificed for organ weights (Liver, kidney, adrenal glands, uterus, ovaries, testes, seminal vesicles, coagulating glands, epididymides, vas deferens, ventral prostate, dorsal lateral prostate, and the levator ani-bulbocavernosus muscle complex) and the right testis and epididymis were examined histologically.There were no treatment related deaths or clinical signs in dams of any dose group. There were no effects on maternal body weights, gain, or food consumption. No changes in any organ weights were observed. There were no treatment related effects on implantation sites or pup weights. Increased pup weights were observed in females at doses $\geq$ 5 mg/kg/day on PND 14 and 21. Male pups exhibited increased body weights during lactation at 5 mg/kg/day. After weaning no difference in offspring body weights remained. F1 males in the 500 mg/kg/d group had a 12% decrease in AGD and AGD/bw ratio. Increased incidences in thoracic areolae and nipple development were observed in F1 males of $\geq$100 mg/kg/day on PND 14. No effects on vaginal opening or preputial separation were observed at any dose. At sexual maturity, males in the 500 mg/kg/day group had decreased weights of epididymides, dorsal lateral prostate, and levator-ani-bulbocavernosus muscle. No effects on organ weights were observed at any other doses. Gross necropsy showed enlarged testes in 2 animals at 100 mg/kg/day and in 8 animals at 500 mg/kg/day. F1 females had no effects on organ weights or gross pathology at any dose.F1 males at 500 mg/kg/day exhibited malformed epididymis in 40% of animals (82% of litters) and absent or malformed vas deferens in 28% of animals (82% of litters). Five (9%) F1 males at 500 mg/kg/day exhibited hypospadias. Testicular lesions include seminiferous tubule degeneration (43% of animals, 82% litters) and interstitial hyperplasia (24% animals, 45% litters).

[26] 673305: Groups of pregnant Sprague Dawley rats (20/group, 11/group at the high dose) were administered DBP (purity 99%) via gavage in corn oil at doses of 0 (vehicle control), 0.5, 5, 50, 100, or 500 mg/kg/day during gestation days GD 12-21. Offspring was weaned on PND21. Dams were evaluated for clinical signs of toxicity, body weights, weight gain, and food consumption throughout the study, for implantation sites, live and dead pups after delivery and euthanized the day following weaning for gross necropsy (including implantation sites) and evaluation of organ weights (liver, kidney, adrenal gland, uterus, and ovaries). On the day of delivery

(PND1), pups were evaluated for number of live and dead pups, clinical signs of toxicity, pup weights, and anogenital distance (AGD). On PND 14 male offspring were examined for location and number of nipples and areolae. At weaning, offspring were separated by sex and examined daily for vaginal opening or preputial separation. Once offspring reached sexual maturity, (PND 110 for males and PND80 for females) body weights were taken, external genitalia were examined for malformations, and animals were sacrificed for organ weights (Liver, kidney, adrenal glands, uterus, ovaries, testes, seminal vesicles, coagulating glands, epididymides, vas deferens, ventral prostate, dorsal lateral prostate, and the levator ani-bulbocavernosus muscle complex) and the right testis and epididymis were examined histologically.There were no treatment related deaths or clinical signs in dams of any dose group. There were no effects on maternal body weights, gain, or food consumption. No changes in any organ weights were observed. There were no treatment related effects on implantation sites or pup weights. Increased pup weights were observed in females at doses $\geq$ 5 mg/kg/day on PND 14 and 21. Male pups exhibited increased body weights during lactation at 5 mg/kg/day. After weaning no difference in offspring body weights remained. F1 males in the 500 mg/kg/d group had a 12% decrease in AGD and AGD/bw ratio. Increased incidences in thoracic areolae and nipple development were observed in F1 males of $\geq$100 mg/kg/day on PND 14. No effects on vaginal opening or preputial separation were observed at any dose. At sexual maturity, males in the 500 mg/kg/day group had decreased weights of epididymides, dorsal lateral prostate, and levator-ani-bulbocavernosus muscle. No effects on organ weights were observed at any other doses. Gross necropsy showed enlarged testes in 2 animals at 100 mg/kg/day and in 8 animals at 500 mg/kg/day. F1 females had no effects on organ weights or gross pathology at any dose.F1 males at 500 mg/kg/day exhibited malformed epididymis in 40% of animals (82% of litters) and absent or malformed vas deferens in 28% of animals (82% of litters). Five (9%) F1 males at 500 mg/kg/day exhibited hypospadias. Testicular lesions include seminiferous tubule degeneration (43% of animals, 82% litters) and interstitial hyperplasia (24% animals, 45% litters).

[27] 673305: Groups of pregnant Sprague Dawley rats (20/group, 11/group at the high dose) were administered DBP (purity 99%) via gavage in corn oil at doses of 0 (vehicle control), 0.5, 5, 50, 100, or 500 mg/kg/day during gestation days GD 12-21. Offspring was weaned on PND21. Dams were evaluated for clinical signs of toxicity, body weights, weight gain, and food consumption throughout the study, for implantation sites, live and dead pups after delivery and euthanized the day following weaning for gross necropsy (including implantation sites) and evaluation of organ weights (liver, kidney, adrenal gland, uterus, and ovaries). On the day of delivery (PND1), pups were evaluated for number of live and dead pups, clinical signs of toxicity, pup weights, and anogenital distance (AGD). On PND 14 male offspring were examined for location and number of nipples and areolae. At weaning, offspring were separated by sex and examined daily for vaginal opening or preputial separation. Once offspring reached sexual maturity, (PND 110 for males and PND80 for females) body weights were taken, external genitalia were examined for malformations, and animals were sacrificed for organ weights (Liver, kidney, adrenal glands, uterus, ovaries, testes, seminal vesicles, coagulating glands, epididymides, vas deferens, ventral prostate, dorsal lateral prostate, and the levator ani-bulbocavernosus muscle complex) and the right testis and epididymis were examined histologically.There were no treatment related deaths or clinical signs in dams of any dose group. There were no effects on maternal body weights, gain, or food consumption. No changes in any organ weights were observed. There were no treatment related effects on implantation sites or pup weights. Increased pup weights were observed in females at doses $\geq$ 5 mg/kg/day on PND 14 and 21. Male pups exhibited increased body weights during lactation at 5 mg/kg/day. After weaning no difference in offspring body weights remained. F1 males in the 500 mg/kg/d group had a 12% decrease in AGD and AGD/bw ratio. Increased incidences in thoracic areolae and nipple development were observed in F1 males of $\geq$100 mg/kg/day on PND 14. No effects on vaginal opening or preputial separation were observed at any dose. At sexual maturity, males in the 500 mg/kg/day group had decreased weights of epididymides, dorsal lateral prostate, and levator-ani-bulbocavernosus muscle. No effects on organ weights were observed at any other doses. Gross necropsy showed enlarged testes in 2 animals at 100 mg/kg/day and in 8 animals at 500 mg/kg/day. F1 females had no effects on organ weights or gross pathology at any dose.F1 males at 500 mg/kg/day exhibited malformed epididymis in 40% of animals (82% of litters) and absent or malformed vas deferens in 28% of animals (82% of litters). Five (9%) F1 males at 500 mg/kg/day exhibited hypospadias. Testicular lesions observed in males at 500 mg/kg/day include seminiferous tubule degeneration (43% of animals, 82% litters) and interstitial hyperplasia (24% animals, 45% litters).

[28] 673308: In a non-guideline reproductive/developmental toxicity study, 2-month-old female Long Evans rats (15 rats/ group) received chow containing 0, 0.61, or 2.5 g/kg-chow of dibutyl phthalate (DBP). The study authors state that these concentrations of DBP in chow equated to daily doses of 0, 12, and 50 mg/kg body weight per day. No animal body weights or food consumption data were provided and these doses cannot be verified. Using default body weights and food consumption values for female Long Evans rats for a subchronic duration (U.S. EPA, 1988), the reported concentrations in chow are equivalent to adjusted daily doses of 61.2 and 250.8 mg/kg-day, respectively. However, the study reported reductions in body weight gain so it is unclear whether using default values is appropriate for this study. It is also possible the author-reported doses in mg/kg-day are instead human equivalent doses (HEDs) as they are close to the HEDs of 13.8 and 56.40 mg/kg-day, determined using the default values (U.S. EPA, 1988). The duration of exposure is unclear. The study abstract states that females were treated for 2 months and were mated during this time; however, the methods state that females were dosed for 2.5 months prior to mating. All 45 female rats were paired with 10 male rats receiving the control chow. Additional details of pairing (number of females per male, duration of mating) were not provided. Female rats were maintained on their respective chows throughout pregnancy. It was not specified whether females were also maintained on the diets during lactation. Body weights of treated females were measured weekly throughout the experiment, and total weight gain was recorded. It was not specified whether females were monitored for clinical signs, and food and water consumption were not measured. Following mating, the percentage of pregnant females was recorded and after birth, the litter size, pup survival (%), and female:male ratio among the pups were noted. Birth weights were not recorded, but on PND2 and 6, individual pup body weights were measured and the total individual pup body weight gains from PND2 to PND6 were calculated. The number of days to eye-opening from birth was monitored starting on PND6. On PND14, six male pups from each group were weighed and sacrificed. The testis and thymus of these male pups were harvested and weighed, and the plasma was harvested for future hormonal determinations. Pups were weaned on PND22 and were placed on the respective maternal diets. The number of days to vaginal opening and first estrous among female offspring and the number of days to preputial separation among male offspring were recorded for all study groups. Body weight data were not reported. Weight gain during different periods of the study (e.g., pre-mating, pregnancy, lactation) was not reported. Total weight gain among treated females "that received the experimental chows during 2 months" was reduced, by 26% in both the 12 and 50 mg/kg-day groups. The authors stated that body weight gain was "lower" at 50 mg/kg-day, but not at 12 mg/kg-day; the data table did not contain statistical analysis results and indicated the weight gain was over 3 months rather than 2 months. The study discussion mentioned that female body weight gain "does not prove to be statistically significant." The number of females (n) that became pregnant was not reported, but the percentages of pregnant females were 81.8, 81.8, and 58.3% at 0, 12, and 50 mg/kg-day, respectively. The study text noted the decrease at 50 mg/kg-day was significant. The litter size, pup survival (%), and female:male ratio were not statistically significantly altered with DBP treatment in either group. It is unclear if the authors used the litter as the experimental unit in their analysis of litter data. Pup body weights on PND2 were significantly reduced by 10% and 23% in the 12 and 50 mg/kg groups, respectively. However, by PND6, pup body weights were only reduced in the 12 mg/kg group (12% decrease as compared to the control group). There were no treatment-related changes in total pup body weight gains from PND2 to PND6 or in the number of days to eye-opening. Male offspring body weights and relative thymus weights on PND14 were very similar between study groups, with no significant changes noted. However, relative testis weights of male offspring in both the 12 and 50 mg/kg groups on PND14 were significantly decreased by about 25%. Absolute testis weights were not reported. The remaining male offspring in the 50 mg/kg group exhibited a large delay in preputial separation, with this separation occurring 4 days after that of the male offspring in the control group. Time to vaginal opening and time to first estrous in female pups were delayed with DBP treatment, reaching significance in the 12 mg/kg group for time to vaginal opening (~1.25 day delay) and in the 50 mg/kg group for both time to vaginal opening (~1.75 day delay) and first estrous (~1.75 day delay). No author-reported toxicity values were provided. Based on the data presented, effects were observed in all treatment groups, including significantly reduced pup body weights (PND 2 and 6), reduced pup testis relative weight (PND14), and delayed time to vaginal opening among female pups in the lowest treatment group. However, reliable NOAEL and LOAEL values cannot be determined due to ambiguity in dosing and the lack of data reporting to allow for independent dose calculations.

[29] 676600: Pregnant female Sprague-Dawley rats (14-16/group) were exposed to 0, 50, 250 or 500 mg/kg/day of di-n-butyl-phthalate (DBP) via oral gavage in corn oil and tween-80 vehicle for 42 days from GD1 to PND21, covering prenatal development and lactation. Animals were monitored for clinical signs of toxicity and body weights were recorded daily. Upon birth, the number, sex ratio and weight of all offspring were recorded. On

PND4, anogenital distance (AGD) was evaluated in offspring of both sexes. Litters were culled to 4 of each sex on PND4. Body weights for individual pups were recorded weekly. Post-mortem examinations were performed on male offspring at PND 14 (at one pup/litter), PND 21 (with 22-28 pups/group) and at PND70 (with 20/pups/group). Body weights and testes and epididymides weights were measured on PND14 and PND21, with these parameters and additional organ weights for liver, kidneys, pituitary gland and prostate on PND 70. On PND 70, the position of the testes, gross morphology of the internal and external genitalia was evaluated. The left testis was used for histopathology and the right testis was used to measure sperm number, motility, malformation rate and total sperm heads per testis and per weight of testis.No significant differences were observed for maternal body weights, sex ratio of live fetuses, offspring survival to weaning, offspring body weights at PND70, right testis weight, absolute pituitary weight or relative right testis weights on PND70. Significantly reduced live pups per litter were observed at 500 mg/kg/day. Reduced weight at birth in both males (by 12%) and females (by 10%) were observed at doses of 250 mg/kg/day and higher. Significantly reduced AGD was observed in males (but not females) at doses of 250 mg/kg/day and higher. Undescended testes and underdeveloped epididymides were observed in 2/22 on PND21 at 500 mg/kg/day. On PND70, observed genital malformations included testicular atrophy in 1/20 animals at 250 mg/kg/day and 6/20 animals at 500 mg/kg/day, underdeveloped epididymides in 1/20 animals at 250 mg/kg/day and 5/20 animals at 500 mg/kg/day, and absence of epidydimides in 1/20 animals at 500 mg/kg/day. There were no significant differences in absolute or relative organ weights on PND14 or PND21. Changes in organ weights observed on PND70 included: increased relative liver weight at 250 mg/kg/day (by 8%), decreased relative liver weight at 500 mg/kg/day (by 7%), decreased absolute liver weight at 500 mg/kg/day (by 9%), decreased absolute and relative kidney weights at 500 mg/kg/day (by 9% and 7% respectively), decreased absolute right epidydmidis weights at 250 mg/kg/day (by 14%), decreased relative right epididymidis weights (by 28%), decreased absolute prostate weight at 250 mg/kg/day (by 28% and 31% respectively, relative and absolute prostate weight changes were not significantly altered at 500 mg/kg/day) and increased relative pituitary weight at 500 mg/kg/day (by 12%). Significant differences in assessed sperm parameters included decreased number of sperm at 500 mg/kg/day, decreased percent of motile sperm at 250 mg/kg/day (by 29%), decreased total sperm heads per testis and per gram of testis at 250 mg/kg/day. Histopathological effects included small diameter tubules, degeneration or exfoliation of the germinal epithelium at 250 mg/kg/day and degeneration of seminiferous tubules, depletion of germ cells, and loss of spermatogenic epithelium at 500 mg/kg/day. A LOAEL of 250 mg/kg/day and a NOAEL of 50 mg/kg/day was determined for decreased offspring birth weight, decreased offspring AGD, decreased offspring absolute right epididymis weight, reduced offspring percent of motile sperm and total sperm heads per testis and per gram of testis, degeneration of the germinal epithelium, smaller seminiferous tubule diameter.

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
incident invasive breast cancer	Health Effect: Cancer/Carcinogenesis-breast cancer incidence-Cancer-Reproductive/Developmental-breast cancer incidence-Cancer. Outcome measure: Danish cancer registry (to identify cases), Danish Breast Cancer Group Registry (to classify cases as ER-positive or ER-negative), and Danish Civil Registry (to obtain vital status)	General public. Adults (18+). Denmark; National study. Female. Cohort (Prospective). PESS: . Female residents of Denmark who were alive, without a cancer history, and unexposed to phthalate-containing medications between 1995 and 2005 (n=1,122,042). 2005-2015.	Other (specify), Prescription medication Exposure Route: Ingestion Chronic (more than 28 days) Exposure calculated based on quantities of phthalate-containing ingredients found in prescription medication fills prior to development of breast cancer or censor for another reason as detailed in the study (death, emigration, a different cancer diagnosis, etc.).	Cox Proportional Hazards Model. Confounders adjusted for: Age, menopausal status, other phthalate exposures, use of potentially confounding comedications (cardiac glycosides, hormone therapy, aspirin, oral contraceptives, and statins), drug substance exposures, and Charlson comorbidity index.	Lowest exposure concentration for a significant adverse health outcome response: 10,000 or more mg. All breast cancer cases - HR (95% CI) for 10,000 or more mg vs. unexposed: 2.0 (1.1, 3.6)ER-positive breast cancer cases - HR (95%) CI for 10,000 or more mg vs. unexposed: 1.9 (1.1, 3.5). An approximately two-fold statistically significant increase in risk of invasive breast cancer and ER-positive breast cancer specifically was observed in women with the highest category of DBP exposure (10,000 mg or more) as compared with unexposed women..	Ahern et. al 2019 5433311 High
incident invasive breast cancer	Health Effect: Cancer/Carcinogenesis-breast cancer incidence-Cancer-Reproductive/Developmental-breast cancer incidence-Cancer. Outcome measure: Danish cancer registry (to identify cases), Danish Breast Cancer Group Registry (to classify cases as ER-positive or ER-negative), and Danish Civil Registry (to obtain vital status)	General public. Adults (18+). Denmark; national study. Female. Cohort (Prospective). PESS: . Female residents of Denmark who were alive, without a cancer history, and unexposed to phthalate-containing medications between 1995 and 2005 (n=1,122,042). 2005-2015.	Other (specify), prescription medication Exposure Route: Ingestion Chronic (more than 28 days) Exposure calculated based on quantities of phthalate-containing ingredients found in prescription medication fills prior to development of breast cancer or censor for another reason as detailed in the study (death, emigration, a different cancer diagnosis, etc.).	Cox Proportional Hazards Model. Confounders adjusted for: age, menopausal status, other phthalate exposures, use of potentially confounding comedications (cardiac glycosides, hormone therapy, aspirin, oral contraceptives, and statins), drug substance exposures, and Charlson comorbidity index.	Lowest exposure concentration for a significant adverse health outcome response: 10,000 or more mg. All breast cancer cases - HR (95% CI) for 10,000 or more mg vs. unexposed: 2.0 (1.1, 3.6)ER-positive breast cancer cases - HR (95%) CI for 10,000 or more mg vs. unexposed: 1.9 (1.1, 3.5). An approximately two-fold statistically significant increase in risk of invasive breast cancer and ER-positive breast cancer specifically was observed in women with the highest category of DBP exposure (10,000 mg or more) as compared with unexposed women.	Ahern et. al 2019 5433311 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*
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 DBP:FVC, full study population: −0.08 (−0.16, −0.003)FVC% predicted, full study population: − 3.32 (−5.66, −0.98)FVC, participants age >= 60: − 0.37 (− 0.63, −0.10)FVC% predicted, participants age >= 60: −14.18 (−23.36, −5.00)FEV1, participants age >=60: −0.25 (−0.46, −0.04)FEV1% predicted, participants age >=60: −13.41 (−23.38, −3.44). Significant inverse associations with FVC and FVC% predicted in all study participants and among participants age >= 60. Significant inverse associations with FEV1 and FEV1% predicted only 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
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

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
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
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 chemiluminescent 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: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured concurrently with outcome.	Linear Regression. Confounders adjusted for: university graduate, age≥30, BMI≥25, North American birthplace, income≥60,000, smoking status.	Lowest exposure concentration for a significant adverse 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 reported 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*
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

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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*
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. Among girls, the BOT-2 total composite score was lower with higher prenatal concentrations of ln MnBP (b=-2.09; 95%CI: [-3.43, 0.75]). BOT-2 fine motor composite score was lower with higher prenatal ln (MnBP) (b= –1.43; –95% CI: [–2.44, –0.42]).. Among girls, the adjusted BOT-2 total composite score was lower with higher prenatal concentrations of ln (MnBP). BOT-2 fine motor composite score was lower with higher prenatal ln (MnBP). No significant associations between prenatal ln (MnBP) and any outcome among boys. In contrast to prenatal phthalate results, none of the child MnBP phthalates were associated with BOT-2 scores..	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*
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. Among girls, the BOT-2 total composite score was lower with higher prenatal concentrations of ln MnBP (b=-2.09; 95%CI: [-3.43, 0.75]). BOT-2 fine motor composite score was lower with higher prenatal ln (MnBP) (b= –1.43; –95% CI: [–2.44, –0.42]).. Among girls, the adjusted BOT-2 total composite score was lower with higher prenatal concentrations of ln (MnBP). BOT-2 fine motor composite score was lower with higher prenatal ln (MnBP). No significant associations between prenatal ln (MnBP) and any outcome among boys. In contrast to prenatal phthalate results, none of the child MnBP phthalates were associated with BOT-2 scores..	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*
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*
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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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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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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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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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
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
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

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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):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
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

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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):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
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

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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.	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
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

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
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
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

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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 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
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, 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 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

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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 (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 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
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

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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 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
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. 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

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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 (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 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
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

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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 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
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

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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 (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
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

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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 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*
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*
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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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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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.	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 MnBP was associated with somatic and withdrawn personalities among girls (MEAN RATIOS FOR MnBP ARE NOT SIGNIFICANT IN APPENDICES). Authors note that prenatal exposure to MnBP was associated with somatic and withdrawn personalities among girls (MEAN RATIOS FOR MnBP 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*
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 girls age 5-years-old. MECPP, withdrawn = 1.26 (1.04-1.51); MEHHP, withdrawn = 1.23 (1.04 - 1.45); MEOHP, withdrawn = 1.26 (1.06 - 1.5); MEHP, withdrawn = 1.29 (1.12 - 1.5); MEOHP, thought problems = 1.06 (0.93 - 1.22); MEHP, thought problems = 1.28 (1.09 - 1.49); MEOHP, total internalizing behavior score = 1.14 (1.01 - 1.27); MEHP, total internalizing behavior score = 1.14 (1.03 - 1.25) Mean Ratio (95% CI) per 1 log10 unit increase for following externalizing behaviors in CBCL among girls age 5-years-old. MEHP, rule breaking = 1.18 (1.04-1.35); MECPP, aggressive behavior = 1.23 (1.06 - 1.42); MEHHP, aggressive behavior = 1.19 (1.05 - 1.36); MEOHP, aggressive behavior = 1.21 (1.05 - 1.38); MEHP, aggressive behavior = 1.18 (1.06 - 1.33); MECPP, total externalizing behavior score = 1.21 (1.05 - 1.39); MEHHP, total externalizing behavior score = 1.18 (1.04 - 1.33); MEOHP, total externalizing behavior score = 1.19 (1.05 - 1.35); MEHP, total externalizing behavior score = 1.18 (1.06 - 1.32); MECPP, total CBCL score = 1.14 (1.02 - 1.27); MEHHP, total CBCL score = 1.14 (1.02 - 1.27); MEOHP, total CBCL score = 1.13 (1.02 - 1.25); MEHP, total CBCL score = 1.14 (1.06 - 1.24). MECPP was associated with a greater likelihood of being withdrawn and with more aggressive behavior, a greater total externalizing behavior score, and a greater total CBCL score among girls age 5 years old.MEHHP was associated with a greater likelihood of being withdrawn and with more aggressive behavior, a greater total externalizing behavior score, and a greater total CBCL score among girls age 5 years old.MEOHP was associated with a greater likelihood of being withdrawn, having thought problems, and a greater total internalizing score in addition to having more aggressive behavior, a greater total externalizing behavior score, and a greater total CBCL score among girls age 5 years old.MEHP was associated with a greater likelihood of being withdrawn, having thought problems, and a greater total internalizing score in addition to greater rule breaking, having more aggressive behavior, a greater total externalizing behavior score, and a greater total CBCL score among girls 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. 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*
Fine motor skills	Health Effect: Neurological/Behavioral-fine and gross motor function at age 11-Non-cancer-Reproductive/Developmental-fine and gross motor function at age 11-Non-cancer. Outcome measure: Bruininks-Oseretsky Test of Motor Proficiency-2 (BOT-2, short version)	General public, Pregnant people. Middle childhood (6-11), Adults (18+). United States; Northern Manhattan and South of the Bronx. 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). 209 mother-child pairs from the CCCEH study (female children n = 116; male children n = 93). Columbia Center for Children's Environmental Health (Mother and Child Study) (CCCEH). 1999-2006.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Weighted quartile sum regression. Confounders adjusted for: child age, child BMI z-score at time of BOT-2 performance, maternal race, prenatal alcohol consumption, maternal demoralization score, HOME score, urine specific gravity.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI): -2.57 (-4.16, -0.97). Among females, significant negative association for non-DEHP metabolites (MBP, MIBP, MBzP) in WQS regression. Weight of MBzP appears to be just over 0.2 in WQS model..	Daniel et. al 2020 6957610 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*
Fine motor skills	Health Effect: Neurological/Behavioral-fine and gross motor function at age 11-Non-cancer-Reproductive/Developmental-fine and gross motor function at age 11-Non-cancer. Outcome measure: Bruininks-Oseretsky Test of Motor Proficiency-2 (BOT-2, short version)	General public, Pregnant people. Middle childhood (6-11), Adults (18+). United States; Northern Manhattan and South of the Bronx. 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). 209 mother-child pairs from the CCCEH study (female children n = 116; male children n = 93). Columbia Center for Children's Environmental Health (Mother and Child Study) (CCCEH). 1999-2006.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Weighted quartile sum regression. Confounders adjusted for: child age, child BMI z-score at time of BOT-2 performance, maternal race, prenatal alcohol consumption, maternal demoralization score, HOME score, urine specific gravity.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI): -2.57 (-4.16, -0.97). Among females, significant negative association for non-DEHP metabolites (MBP, MIBP, MBzP) in WQS regression. Weight of MBP appears to be just over 0.05 in WQS model..	Daniel et. al 2020 6957610 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*
Gross motor skills	Health Effect: Neurological/Behavioral-fine and gross motor function at age 11-Non-cancer-Reproductive/Developmental-fine and gross motor function at age 11-Non-cancer. Outcome measure: Bruininks-Oseretsky Test of Motor Proficiency-2 (BOT-2, short version)	General public, Pregnant people. Middle childhood (6-11), Adults (18+). United States; Northern Manhattan and South of the Bronx. 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). 209 mother-child pairs from the CCCEH study (female children n = 116; male children n = 93). Columbia Center for Children's Environmental Health (Mother and Child Study) (CCCEH). 1999-2006.	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: child age, child BMI z-score at time of BOT-2 performance, maternal race, prenatal alcohol consumption, maternal demoralization score, HOME score, urine specific gravity.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI): -0.85 (-1.49, -0.20). Among females, significant negative association for non-DEHP metabolites (MBP, MIBP, MBzP) in linear regression. No significant findings for fine motor functions or among males..	Daniel et. al 2020 6957610 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*
Gross motor skills	Health Effect: Neurological/Behavioral-fine and gross motor function at age 11-Non-cancer-Reproductive/Developmental-fine and gross motor function at age 11-Non-cancer. Outcome measure: Bruininks-Oseretsky Test of Motor Proficiency-2 (BOT-2, short version)	General public, Pregnant people. Middle childhood (6-11), Adults (18+). United States; Northern Manhattan and South of the Bronx. 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). 209 mother-child pairs from the CCCEH study (female children n = 116; male children n = 93). Columbia Center for Children's Environmental Health (Mother and Child Study) (CCCEH). 1999-2006.	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: child age, child BMI z-score at time of BOT-2 performance, maternal race, prenatal alcohol consumption, maternal demoralization score, HOME score, urine specific gravity.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI): -0.85 (-1.49, -0.20). Among females, significant negative association for non-DEHP metabolites (MBP, MIBP, MBzP) in linear regression. No significant findings for fine motor functions or among males..	Daniel et. al 2020 6957610 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
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

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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)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
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

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Thyroid stimulating hormone (TSH), free T4 (fT4)	Health Effect: Thyroid-Serum thyroid stimulating hormone (TSH) and serum free T4 (fT4)-Non-cancer. Outcome measure: Chemi-luminescence microparticle immunoassay	General public. Preschool (3-5), Middle childhood (6-11). Turkey; Antalya. Female. Case-Control. PESS: Lifestage , Studies focusing on repro-ductive 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: Un-clear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Not specified but likely concur-rent 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
Weight, BMI	Health Effect: Nutritional/Metabolic-Body weight, BMI-Non-cancer. Outcome measure: Assess-ment by clinical pediatrician	General public. Preschool (3-5), Middle childhood (6-11). Turkey; Antalya. Female. Case-Control. PESS: Lifestage , Studies focusing on repro-ductive 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: Un-clear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Not specified but likely concur-rent 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

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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)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
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

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Thyroid stimulating hormone (TSH), free T4 (fT4)	Health Effect: Thyroid-Serum thyroid stimulating hormone (TSH) and serum free T4 (fT4)-Non-cancer. Outcome measure: Chemi-luminescence 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: Un-clear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Not specified but likely concur-rent 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 indi-vidual DEHP metabolites and thyroid hormones..	Durmaz et. al 2018 5512126 Medium
Weight, BMI	Health Effect: Nutritional/Metabolic-Body weight, BMI-Non-cancer. Outcome measure: Assess-ment by clinical pediatrician	General public. Preschool (3-5), Middle childhood (6-11). Turkey; Antalya. Female. Case-Control. PESS: Lifestage , Studies focusing on repro-ductive 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: Un-clear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Not specified but likely concur-rent 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

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
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*
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

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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

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

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

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

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 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

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Externalizing 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 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

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

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

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

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

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

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Externalizing 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 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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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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*
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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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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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

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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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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*
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*
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
Activated partial thromboplastin 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

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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) = -0.530 (-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
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

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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-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
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*
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
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

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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*
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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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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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 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<0.01Child 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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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*
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

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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*
Sex hormone concentrations (luteinizing hormone, follicle stimulating hormone, testosterone, androstenedione, 17alpha-hydroxyprogesterone, dehydroepiandrosterone sulfate	Health Effect: Reproductive/Developmental-hormone levels:testosterone, luteinizing hormone (LH), follicle stimulating hormone (FSH), androstenedione (adione), 17 alpha-hydroxyprogesterone (17-OHP), dehydroepiandrosterone (DHEAS), testosterone/LH ratio-Non-cancer. Outcome measure: Measured in serum of infants at approximately 3-4 months of age	General public, Pregnant people. Infant (0-1), Adults (18+). Denmark; Odense. 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). Pregnant women and their singleton infants residing in Odense, Denmark (n=479 mother/child pairs). Odense Child Cohort study. 2010-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at approximately 28 weeks gestation.	Linear Regression. Confounders adjusted for: postconceptional age, parity, and BMI z-score.	Lowest exposure concentration for a significant adverse health outcome response: 2nd tertile, but specific ranges not provided; Median (IQR) = 13.2 (5.5, 23.6) ng/mL. Percent change (95%) in testosterone among males for MBP:T2 vs. T1: -20.0 (-35.5, -0.7)T3 vs T1: -22.5 (-38.1, -2.9)per doubling MBP: -8.5 (-14.5, -2.3) p-trend: 0.029Percent change (95%) in DHEAS among males for MBP:T2 vs. T1: 38.0 (9.1, 74.6)T3 vs T1: 20.8 (-5.5, 54.5) p-trend: 0146. For testosterone among males, a significant inverse association was reported for T3 vs T1 and T2 vs. T1 of MBP, and the p-value for trend was statistically significant. When MBP was modeled continuously, the inverse association was maintained. For DHEAS, a significant inverse association was reported among males for the 2nd but not 3rd tertile of MBP. No other stiatistically significant results for other sex hormones or among females..	Muerköster et. al 2020 7978907 Medium
Sex hormone concentrations (luteinizing hormone, follicle stimulating hormone, testosterone, androstenedione, 17alpha-hydroxyprogesterone, dehydroepiandrosterone sulfate	Health Effect: Reproductive/Developmental-hormone levels:testosterone, luteinizing hormone (LH), follicle stimulating hormone (FSH), androstenedione (adione), 17 alpha-hydroxyprogesterone (17-OHP), dehydroepiandrosterone (DHEAS), testosterone/LH ratio-Non-cancer. Outcome measure: Measured in serum of infants at approximately 3-4 months of age	General public, Pregnant people. Infant (0-1), Adults (18+). Denmark; Odense. 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). Pregnant women and their singleton infants residing in Odense, Denmark (n=479 mother/child pairs). Odense Child Cohort study. 2010-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at approximately 28 weeks gestation.	Linear Regression. Confounders adjusted for: postconceptional age, parity, and BMI z-score.	Lowest exposure concentration for a significant adverse health outcome response: 2nd tertile, but specific ranges not provided; Median (IQR) = 2.4 (<LOD, 5.2) ng/mL. Percent change (95%) in FSH among males for MbzP:T2 vs. T1: -13.8 (-25.3, -0.5)T3 vs T1 –6.6 (-18.9, 7.7) p-trend 0.411. For follicle stimulating hormone among males, a significant inverse association was reported for T2 vs T1. No significant results were reported for other sex hormones among males or females..	Muerköster et. al 2020 7978907 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*
Sex hormone concentrations (luteinizing hormone, follicle stimulating hormone, testosterone, androstenedione, 17alpha-hydroxyprogesterone, dehydroepiandrosterone sulfate	Health Effect: Reproductive/Developmental-hormone levels:testosterone, luteinizing hormone (LH), follicle stimulating hormone (FSH), androstenedione (adione), 17 alpha-hydroxyprogesterone (17-OHP), dehydroepiandrosterone (DHEAS), testosterone/LH ratio-Non-cancer. Outcome measure: Measured in serum of infants at approximately 3-4 months of age	General public, Pregnant people. Infant (0-1), Adults (18+). Denmark; Odense. 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). Pregnant women and their singleton infants residing in Odense, Denmark (n=479 mother/child pairs). Odense Child Cohort study. 2010-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at approximately 28 weeks gestation.	Linear Regression. Confounders adjusted for: postconceptional age, parity, and BMI z-score.	Lowest exposure concentration for a significant adverse health outcome response: 3rd tertile, but specific ranges not provided; Median (IQR) = 23.6 (10.3, 41.6) ng/mL. Percent change (95%) in testosterone/LH ratio among males for MiBP:T2 vs T1: -15.3 (-32.1, 5.7),T3 vs. T1: -21.5 (-37.6, -1.2) p-trend 0.039. For the testosterone/LH ratio among males, a significant negative association was reported for T3 vs T1, and the p-value for trend was statistically significant. No other sex hormones during min-puberty were significant, and no significant results for females..	Muerköster et. al 2020 7978907 Medium
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

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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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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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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, breast-feeding 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, breastfeeding 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, breastfeeding 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, breastfeeding 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*
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*
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
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

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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 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
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

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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: >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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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

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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: 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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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*
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

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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
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

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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: 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
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

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.	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 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.	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

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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
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

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
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
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
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

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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 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
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

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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-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
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

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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 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
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

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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 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
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

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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 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
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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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
resting state fMRI measures [mean fractional amplitude of low-frequency fluctuation (mfALFF) and mean regional homogeneity (mReHo)]	Health Effect: Neurological/Behavioral-Resting state fMRI measures: mean fractional amplitude of low-frequency fluctuation (mfALFF) and mean regional homogeneity (mReHo) in multiple brain regions.-Non-cancer. Outcome measure: functional MRI imaging collected in the resting state	General public. Teens (12-17). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Adolescents (age 11 years through < 21 years). 59 teenagers (33 boys, 26 girls) from Taiwan, mean age 13.95 years. The Taiwan Maternal and Infant Cohort Study (TMICS). Recruitment 2000 to 2001; Follow-up 2015.	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: Family income, gender.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. MBP association with:-lower mfALFF in right middle frontal gyrus and right superior frontal gyrus in both sexes combined (p=0.025)-higher mReHo in the left inferior temporal gyrus and left middle temporal gyrus in both sexes combined (p=0.015). Higher maternal 3rd trimester MBP concentrations were associated with lower activity in the superior frontal gyrus and middle frontal gyrus, and with higher homogeneity in the middle temporal gyrus and inferior temporal gyrus..	Weng et. al 2020 6718530 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*
resting state fMRI measures [mean fractional amplitude of low-frequency fluctuation (mfALFF) and mean regional homogeneity (mReHo)]	Health Effect: Neurological/Behavioral-Resting state fMRI measures: mean fractional amplitude of low-frequency fluctuation (mfALFF) and mean regional homogeneity (mReHo) in multiple brain regions.-Non-cancer. Outcome measure: functional MRI imaging collected in the resting state	General public. Teens (12-17). Taiwan. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Adolescents (age 11 years through < 21 years). 59 teenagers (33 boys, 26 girls) from Taiwan, mean age 13.95 years. The Taiwan Maternal and Infant Cohort Study (TMICS). Recruitment 2000 to 2001; Follow-up 2015.	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: Family income, gender.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. MBzP association with:-lower mfALFF in left and right anterior cingulum gyrus in girls ($p<0.025$) -lower mReHo in the right insula in girls ($p<0.04$). Higher maternal 3rd trimester MBzP concentrations were associated with lower activity in the left and right anterior cingulum gyrus in girls, and with lower homogeneity in right insula in girls..	Weng et. al 2020 6718530 Medium
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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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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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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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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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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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 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

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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 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

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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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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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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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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
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

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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 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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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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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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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*
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 Epidemology Extraction

Dibutyl Phthalate — Metabolite: Mono-n-butyl phthalate (MnBP); Mono-(3-carboxypropyl) phthalate (MCPP)

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
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:DBP (MnBP) aOR (95% CI) with 1-unit increase log10-transformed, high endotoxin: 1.49 (0.87, 2.54); Medium endotoxin: 1.41 (0.83, 2.40); Low endotoxin: 1.01 (0.57, 1.78); Model endotoxin Interaction term p-value: 0.04; The wheeze model interaction term for MCPP was not significant (p=0.42). Asthma: No significant results were noted for asthma and DBP (MnBP or MCPP) models.. DBP (MnBP) had a significant endotoxin interaction term within the wheeze model for low, medium and high endotoxin with an endotoxin interaction term p-value of 0.04. No significant associations were found for DBP (MnBP or MCPP) and asthma. There was no interaction between endotoxin level and any phthalates with rhinitis or hay fever (Supplemental Tables 1 and 2)..	Strassle et. al 2018 4728797 Medium

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Anoscrotal distance (ASD)	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: Continuous MIBP [mean (SD) ng/mL in all infants = 18.3 (36.1)]. Beta (95% CI) per ln-ng/mL increase MiBP (White infants): 1.68 (0.09, 3.27). Significant positive associations prenatal MiBP and anoscrotal distance in white infants only. Results for African American infants are mildly positive but not significant. No other significant results for other AGD measures or for tertiles of MiBP..	Wenzel et. al 2018 4728953 Medium

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Metabolite: Sum DBP metabolites [Mono-isobutyl phthalate (MiBP); Monobutyl phthalate (MBP)]

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Anoscrotal distance (ASD)	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 molar sum of DBP [Specific ranges not provided; mean (SD) nmol/L in all infants = 206 (478)]. Beta (95% CI) for anoscrotal distance:per ln-nmol/L increase sum DBP = 0.99 (0.07, 1.91)3rd tertile vs. 1st tertile of sum DBP = 1.99 (0.06, 3.92)per ln-nmol/L increase sum DBP (white infants only): 1.30 (0.03, 2.57). Significant positive associations between prenatal sum DBP and anoscrotal distance in all infants, and in white infants only. Results for African American infants are mildly positive but not significant. Positive associations were also reported for ASD and tertiles of sum DBP, but only the 3rd vs. 1st tertile was significant. No significant results for other AGD measures..	Wenzel et. al 2018 4728953 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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Metabolite: Monobutyl phthalate (MBP); Mono-3-carboxy-propyl phthalate (MCPP)

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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. . . continued from previous page Metabolite: Monobutyl phthalate (MBP); Mono-3-carboxy-propyl phthalate (MCPP)

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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Metabolite: Monobutyl phthalate (MBP); Mono-3-carboxy-propyl phthalate (MCPP)

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

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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: 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
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

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. . . continued from previous page Metabolite: Monobutyl phthalate (MBP); Mono-3-carboxy-propyl phthalate (MCPP)

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
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
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

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Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
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
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

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Metabolite: Monobutyl phthalate (MBP); Mono-3-carboxy-propyl phthalate (MCPP)

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
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
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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. . . continued from previous page Metabolite: Monobutyl phthalate (MBP); Mono-3-carboxy-propyl phthalate (MCPP)

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. MBP and MCPP Regression coefficients (95% CI) for eGFR: not significant.MBP Regression coefficient (95% CI) for UPCR: -22.74 (-34.54, -9.08), p= 0.002; MCPP regression coefficient for UPCR: not significant.. MBP was associated with a significant decrease in the urinary protein to creatinine ratio (MBP = -22.74 (-34.54, -9.08)), p=0.002. MBP association with eGFR reported in Table 5 as not significant, but noted as having a p-value <0.05 but greater than the Bonferroni-corrected p-value of 0.01..	Malits et. al 2018 4829246 Medium

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Metabolite: Monobutyl phthalate (MBP); Mono-3-carboxy-propyl phthalate (MCPP)

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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Metabolite: Monobutyl phthalate (MBP); Mono-3-carboxy-propyl phthalate (MCPP)

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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Metabolite: Monobutyl phthalate (MBP); Mono-3-carboxy-propyl phthalate (MCPP)

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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Metabolite: Monobutyl phthalate (MBP); Mono-3-carboxy-propyl phthalate (MCPP)

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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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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Metabolite: Monobutyl phthalate (MBP); Mono-3-carboxy-propyl phthalate (MCPP)

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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Metabolite: Monobutyl phthalate (MBP); Mono-3-carboxy-propyl phthalate (MCPP)

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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Metabolite: Monobutyl phthalate (MBP); Mono-3-carboxy-propyl phthalate (MCPP)

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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Metabolite: Monobutyl phthalate (MBP); Mono-3-carboxy-propyl phthalate (MCPP)

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

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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Metabolite: Monobutyl phthalate (MBP); Mono-hydroxybutyl phthalate (MHBP)

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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Metabolite: Monobutyl phthalate (MBP); Mono-hydroxybutyl phthalate (MHBP)

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): ∑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
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

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Metabolite: Monobutyl phthalate (MBP); Mono-hydroxybutyl phthalate (MHBP)

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): -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
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

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Metabolite: Monobutyl phthalate (MBP); Mono-hydroxybutyl phthalate (MHBP)

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): -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

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Metabolite: Monobutyl phthalate (MBP); Mono-hydroxybutyl phthalate (MHBP)

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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Metabolite: Monobutyl phthalate (MBP); Mono-hydroxybutyl phthalate (MHBP)

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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Metabolite: Monobutyl phthalate (MBP); Mono-hydroxybutyl phthalate (MHBP)

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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Metabolite: Monobutyl phthalate (MBP); Mono-hydroxybutyl phthalate (MHBP)

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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Metabolite: Monobutyl phthalate (MBP); Mono-hydroxybutyl phthalate (MHBP)

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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Metabolite: Monobutyl phthalate (MBP); Mono-hydroxybutyl phthalate (MHBP)

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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Metabolite: Monobutyl phthalate (MBP); Mono-hydroxybutyl phthalate (MHBP)

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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Metabolite: Monobutyl phthalate (MBP); Mono-hydroxybutyl phthalate (MHBP)

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*
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
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*
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
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

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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 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

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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...continued from previous page Metabolite: Mono-isobutyl phthalate (MiBP); Monobutyl phthalate (MBP)

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

Dibutyl Phthalate	Metabolite: Monobutyl phthalate (MBP); Mono-isobutyl phthalate (MiBP)

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...continued from previous page Metabolite: Monobutyl phthalate (MBP); Mono-isobutyl phthalate (MiBP)

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*
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	Al-Saleh et. al 2019 5499157 High

...continued from previous page Metabolite: Monobutyl phthalate (MBP); Mono-isobutyl phthalate (MiBP)

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

. . . continued from previous page Metabolite: Monobutyl phthalate (MBP); Mono-isobutyl phthalate (MiBP)

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. 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
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

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. . . continued from previous page Metabolite: Monobutyl phthalate (MBP); Mono-isobutyl phthalate (MiBP)

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. 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
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

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. . . continued from previous page Metabolite: Monobutyl phthalate (MBP); Mono-isobutyl phthalate (MiBP)

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 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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. . . continued from previous page Metabolite: Monobutyl phthalate (MBP); Mono-isobutyl phthalate (MiBP)

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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. . . continued from previous page Metabolite: Monobutyl phthalate (MBP); Mono-isobutyl phthalate (MiBP)

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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...continued from previous page Metabolite: Monobutyl phthalate (MBP); Mono-isobutyl phthalate (MiBP)

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

Human Health Hazard Epidemology Extraction

Dibutyl Phthalate — Metabolite: Sum of Monobutyl phthalate (MBP); Mono-isobutyl phthalate (MiBP)

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 Sum DBP metabolites during GW 18-22 stratified by sex:Females Continuous (per 1-ln increase): 2.48 (1.22, 5.04)Males Continuous (per 1-ln increase): 0.66 (0.36, 1.20)OR (95% CI) for Sum DBP metabolites during GW 24-32 stratified by sex:Females Continuous (per 1-ln increase): 0.82 (0.30, 2.27)Males Continuous (per 1-ln increase): 1.56 (0.43, 5.71). In females, a significant positive association for the sum of DBP metabolites (MBP+MiBP) was reported for GW 18-22 and SGA, but this association was non-significant inverse at GW 24-32. No significant findings were reported for male infants..	Bloom et. al 2019 5494469 Medium

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: T3: 0.94-1.87 μg/L. MHBP adjusted mean (95% CI): T3 = 8.7 (7.8, 9.6), p-value <0.05 T3 vs T2. p-trend: <0.17.. MHBP had significantly reduced numbers of total oocytes reported for T3 vs T2. 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: T3: 0.94-1.87 μg/L. MHBP adjusted mean (95% CI): T3 = 7.1 (6.4, 7.9), p-value $<$0.05 T3 vs T2. p-trend: $<$0.32.. MHBP had significantly reduced numbers of mature oocytes reported for T3 vs T2. 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*
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: 0.94-1.87 μg/L. MHBP adjusted mean (95% CI): T3 = 4.7 (4.1, 5.3), p-value $<$0.05 T3 vs T2. p-trend: $<$0.22.. MHBP had significantly reduced numbers of fertilized oocytes reported for T3 vs T2. 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*
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: 0.94-1.87 μg/L. MHBP adjusted mean (95% CI): T3 = 1.9 (1.6, 2.4), p-value <0.05 T3 vs T2. p-trend: 0.09.. MHBP had significantly reduced numbers of top quality embryos reported for T3 vs T2. No significant associations with live birth or implantation following assisted reproduction..	Machtinger et. al 2018 5743382 Medium

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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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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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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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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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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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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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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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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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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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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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 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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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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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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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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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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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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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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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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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 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*
Strengths and Difficulties Questionnaire (SDQ), total difficulties score	Health Effect: Neurological/Behavioral-Child behavioral and emotional problems at age 7 years, child cognitive and psychomotor development-Non-cancer. Outcome measure: Questionnaire	General public. Middle childhood (6-11). Poland. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). 250 mother-child pairs. Polish Mother and Child Cohort (REPRO_PL). Recruitment: 2007; Follow-up: age of 7 years.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured at age of 7 years.	Linear Regression. Confounders adjusted for: Child's sex and age at examination, age at school attendance, household status, SES, parental educational level, maternal age at birth, traumatic events, children's BMI, place of residence, number of siblings, exposure to tobacco during pregnancy and in children's at 7 years of age.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta (95% CI): 1.5 (0.25, 2.8). Significant positive association between sum of DnBP and total difficulties scores..	Jankowska et. al 2019 5932896 Medium
Strengths and Difficulties Questionnaire (SDQ), hyperactivity/inattention problems	Health Effect: Neurological/Behavioral-Child behavioral and emotional problems at age 7 years, child cognitive and psychomotor development-Non-cancer. Outcome measure: Questionnaire	General public. Middle childhood (6-11). Poland. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). 250 mother-child pairs. Polish Mother and Child Cohort (REPRO_PL). Recruitment: 2007; Follow-up: age of 7 years.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured at age of 7 years.	Linear Regression. Confounders adjusted for: Child's sex and age at examination, age at school attendance, household status, SES, parental educational level, maternal age at birth, traumatic events, children's BMI, place of residence, number of siblings, exposure to tobacco during pregnancy and in children's at 7 years of age.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta (95% CI): 0.72 (0.065, 1.4). Significant positive association between sum of DnBP and hyperactivity/inattention problems..	Jankowska et. al 2019 5932896 Medium
Intelligence and Development Scales (IDS), fluid IQ	Health Effect: Neurological/Behavioral-Child behavioral and emotional problems at age 7 years, child cognitive and psychomotor development-Non-cancer. Outcome measure: Questionnaire	General public. Middle childhood (6-11). Poland. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). 250 mother-child pairs. Polish Mother and Child Cohort (REPRO_PL). Recruitment: 2007; Follow-up: age of 7 years.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured at age of 7 years.	Linear Regression. Confounders adjusted for: Child's sex and age at examination, age at school attendance, household status, SES, parental educational level, maternal age at birth, traumatic events, children's BMI, place of residence, number of siblings, exposure to tobacco during pregnancy and in children's at 7 years of age.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta (95% CI): -0.14 (-0.29, 0.0041). Significant negative association between sum of DnBP and fluid IQ at p<0.1 level..	Jankowska et. al 2019 5932896 Medium

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Metabolite: Monobutyl phthalate (MBP); 3OH-mono-n-butyl phthalate (OH-MnBP)

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Intelligence and Development Scales (IDS), fluid IQ	Health Effect: Neurological/Behavioral-Child behavioral and emotional problems at age 7 years, child cognitive and psychomotor development-Non-cancer. Outcome measure: Questionnaire	General public. Middle childhood (6-11). Poland. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). 250 mother-child pairs. Polish Mother and Child Cohort (REPRO_PL). Recruitment: 2007; Follow-up: age of 7 years.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured at age of 7 years.	Linear Regression. Confounders adjusted for: Child's sex and age at examination, age at school attendance, household status, SES, parental educational level, maternal age at birth, traumatic events, children's BMI, place of residence, number of siblings, exposure to tobacco during pregnancy and in children's at 7 years of age.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta (95% CI): -0.14 (-0.28, 0.0012). Significant negative association between sum of DnBP and mathematical skills at p<0.1 level..	Jankowska et. al 2019 5932896 Medium
Strengths and Difficulties Questionnaire (SDQ), emotional symptoms	Health Effect: Neurological/Behavioral-Child behavioral and emotional problems at age 7 years, child cognitive and psychomotor development-Non-cancer. Outcome measure: Questionnaire	General public. Middle childhood (6-11). Poland. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). 250 mother-child pairs. Polish Mother and Child Cohort (REPRO_PL). Recruitment: 2007; Follow-up: age of 7 years.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured at age of 7 years.	Linear Regression. Confounders adjusted for: Child's sex and age at examination, age at school attendance, household status, SES, parental educational level, maternal age at birth, traumatic events, children's BMI, place of residence, number of siblings, exposure to tobacco during pregnancy and in children's at 7 years of age.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta (95% CI): 0.50 (-0.024, 0.94). Significant positive association between sum of DnBP and emotional symptoms..	Jankowska et. al 2019 5932896 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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Metabolite: Monobutyl phthalate (MBP); 3OH-mono-n-butyl phthalate (OH–MnBP)

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 Epidemology Extraction

Dibutyl Phthalate — Metabolite: Monobutyl phthalate (MBP); mono-iso-butyl phthalate (MiBP); as part of molar sum of Low molecular weight phthalates (LMWP)

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Internalizing problems	Health Effect: Neurological/Behavioral-Behavioral problems–Child Behavior Checklist (CBCL) Internalizing problems, Externalizing problems)-Non-cancer. Outcome measure: Child Behavior Checklist (CBCL) questionnaire	Patients in clinics, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage , Aggregate Exposures (ex. multiple air exposure sources). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). 76 mother-child pairs recruited from the APrON study (Enrolled n=84; Used in analysis n = 76). Alberta Pregnancy Outcomes and Nutrition (APrON) Study. Follow-up: 2013-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Multivariate Regression. Confounders adjusted for: child age.	Lowest exposure concentration for a significant adverse health outcome response: continuous. sum (HMWP) and Internalizing Problems with mediator MD of the right IFO: Beta (95% CI)= 0.09 (0.02, 0.20); sum (HMWP) and Internalizing Problems with mediator MD of the right pyramidal fibers: Beta (95% CI) = 0.11 (0.01, 0.23). Diffusion tensor imaging (DTI) mean diffusivity (MD) of the right inferior fronto-occipital fasciculus (IFO) was a significant mediator of sum(HMWP) prenatal exposure on age 3-5 Child Behavior Checklist (CBCL) Internalizing Problems. DTI MD of the right pyramidal fibers was a significant mediator of sum(HMWP) prenatal exposure on age 3-5 CBCL Internalizing Problems..	England-Mason et. al 2020 6958936 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	Health Effect: Neurological/Behavioral-Behavioral problems–Child Behavior Checklist (CBCL) Internalizing problems, Externalizing problems)-Non-cancer. Outcome measure: Child Behavior Checklist (CBCL) questionnaire	Patients in clinics, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage , Aggregate Exposures (ex. multiple air exposure sources). Lifestage PESS: Pregnant people (parent) or em-bryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). 76 mother-child pairs re-cruited from the APrON study (Enrolled n=84; Used in analysis n = 76). Alberta Pregnancy Outcomes and Nutrition (APrON) Study. Follow-up: 2013-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Un-clear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Multivariate Regression. Confounders adjusted for: child age.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Sum (HMWP) and Externalizing Problems with mediator MD of the right IFO: Beta (95% CI)= 0.09 (0.01, 0.19); Sum (HMWP) and Externalizing Problems with mediator MD of the right pyramidal fibers: Beta (95% CI) = 0.07 (-0.01, 0.20).. Diffusion tensor imaging (DTI) mean diffusivity (MD) of the right inferior fronto-occipital fasciculus (IFO) was a significant mediator of sum(HMWP) prenatal exposure on age 3-5 Child Behavior Check-list (CBCL) Externalizing Problems. DTI MD of the right pyramidal fibers was not a significant mediator of sum(HMWP) prenatal exposure on age 3-5 CBCL Externalizing Problems..	England-Mason et. al 2020 6958936 Medium

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Dibutyl Phthalate — Metabolite: Monobutyl phthalate (MBP); mono-iso-butyl phthalate (MiBP); as part of molar sum of Low molecular weight phthalates (LMWP)

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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	Health Effect: Neurological/Behavioral-Behavioral problems–Child Behavior Checklist (CBCL) Internalizing problems, Externalizing problems)-Non-cancer. Outcome measure: Child Behavior Checklist (CBCL) questionnaire	Patients in clinics, Pregnant people. Infant (0-1), Toddler (2-3), Preschool (3-5), Adults (18+). Canada; Alberta. Female, Male. Cohort (Prospective). PESS: Lifestage , Aggregate Exposures (ex. multiple air exposure sources). Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). 76 mother-child pairs recruited from the APrON study (Enrolled n=84; Used in analysis n = 76). Alberta Pregnancy Outcomes and Nutrition (APrON) Study. Follow-up: 2013-2017.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Multivariate Regression. Confounders adjusted for: child age.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Sum (LMWP) and Internalizing Problems with mediator FA of the left ILF: Beta (95% CI) = 0.09 (-0.01, 0.21). Diffusion tensor imaging (DTI) fractional anisotopy (FA) of the left inferior longitudinal fasciculus (ILF) was not a significant mediator of sum(LMWP) prenatal exposure on age 3-5 Child Behavior Checklist (CBCL) Internalizing Problems..	England-Mason et. al 2020 6958936 Medium

Human Health Hazard Epidemology Extraction

Dibutyl Phthalate | Metabolite: Sum DBP [Mono-isobutyl phthalate (MiBP) ,Monobutyl phthalate (MBP)]

Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Sex hormone concentrations (luteinizing hormone, follicle stimulating hormone, testosterone, androstenedione, 17alpha-hydroxyprogesterone, dehydroepiandrosterone sulfate	Health Effect: Reproductive/Developmental-hormone levels:testosterone, luteinizing hormone (LH), follicle stimulating hormone (FSH), androstenedione (adione), 17 alpha-hydroxyprogesterone (17-OHP), dehydroepiandrosterone (DHEAS), testosterone/LH ratio-Non-cancer. Outcome measure: Measured in serum of infants at approximately 3-4 months of age	General public, Pregnant people. Infant (0-1), Adults (18+). Denmark; Odense. 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). Pregnant women and their singleton infants residing in Odense, Denmark (n=479 mother/child pairs). Odense Child Cohort study. 2010-2012.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at approximately 28 weeks gestation.	Linear Regression. Confounders adjusted for: postconceptional age, parity, and BMI z-score.	Lowest exposure concentration for a significant adverse health outcome response: 3rd tertile, but specific ranges not provided; Median (IQR) = 37.4 (16.3, 67.1) ng/mL. Percent change (95%) in testosterone/LH ratio among males for MBP+MiBP:T2 vs T1: -16.7 (-33.3, 4.0),T3 vs. T1: -21.5 (-37.6, -1.2) p-trend 0.040. For the testosterone/LH ratio among males, a significant negative association was reported for T3 vs T1 of the molar sum of MBP+MiBP, and the p-value for trend was statistically significant. No other sex hormones during min-puberty were significant, and no significant results for females..	Muerköster et. al 2020 7978907 Medium

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

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