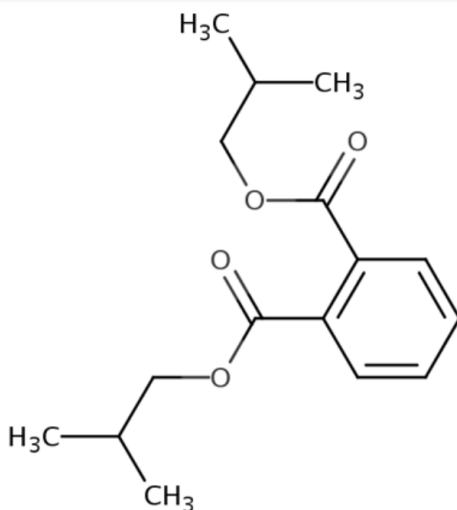


**Data Extraction Information for  
Environmental Hazard and Human Health Hazard Animal Toxicology and  
Epidemiology for  
Di-isobutyl Phthalate (DIBP)  
(1,2-Benzenedicarboxylic acid, 1,2-bis(2-methylpropyl) ester)**

**Systematic Review Support Document for the Risk Evaluation**

**CASRN: 84-69-5**



*December 2025*

---

This supplemental file contains information regarding the data extraction results relevant to the [Environmental Hazard Assessment for Diisobutyl Phthalate \(DIBP\)](#) and the [Human Health Hazard Assessment for Diisobutyl Phthalate \(DIBP\)](#). For the data extraction, EPA used the TSCA systematic review process described in the [Draft Systematic Review Protocol Supporting TSCA Risk Evaluations for Chemical Substances](#) (also referred to as the '2021 Draft Systematic Review Protocol'). Any updated steps in the systematic review process for data extraction since the publication of the 2021 Draft Systematic Review Protocol are described in the [Risk Evaluation for Diisobutyl Phthalate \(DIBP\) – 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 (target chemical followed by analog 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 DIBP, toxicity data gaps were identified for mammalian wildlife relevant to the terrestrial compartment of the environmental hazard assessment. This table includes rodent data for DIBP, 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 also extracted and are listed here.

**Human Health Hazard Animal Toxicity Extraction:** This supplemental file contains data extraction information for references that underwent data quality evaluation. Listed references with data extractions (1) met PECO screening criteria, (2) were published prior to 2014 which was the preferred literature cutoff date by EPA for data reported in previous assessments, and (3) reported human equivalent dose (HED) derived from points of departure (POD) that contained lowest-observable-effect levels (LOEL) greater than an order of magnitude of the lowest HED lowest-observable-adverse-effect level (LOAEL) identified across existing assessments. For a detailed description on these three criteria, see the [Risk Evaluation for Diisobutyl Phthalate \(DIBP\) – 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 [Risk Evaluation for Diisobutyl Phthalate \(DIBP\) – 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.

HERO ID	Reference	Page
<b>Environmental Hazard</b>		<b>10</b>
<b>Diisobutyl Phthalate</b>		
<b>Habitat: Aquatic Taxa: Arthropods</b>		
	<i>Nitocra spinipes</i> (Harpacticoid Copepod)	
<b>51937</b>	Linden, E., Bengtsson, B. E., Svanberg, O., Sundstrom, G. (1979). The acute toxicity of 78 chemicals and pesticide formulations against two brackish water organisms, the bleak ( <i>Alburnus alburnus</i> ) and the harpacticoid <i>Nitocra spinipes</i> . <i>Chemosphere</i> 8(11-12):843-851.	<b>10</b>
<b>Habitat: Aquatic Taxa: Non-vascular plants</b>		
	<i>Karenia brevis</i> (Dinoflagellate)	
<b>3230225</b>	Liu, N., Wen, F., Li, F., Zheng, X., Liang, Z., Zheng, H. (2016). Inhibitory mechanism of phthalate esters on <i>Karenia brevis</i> . <i>Chemosphere</i> 155:498-508.	<b>11</b>
<b>Habitat: Aquatic Taxa: Fish</b>		
	<i>Danio rerio</i> (Zebra Danio)	
<b>6959356</b>	Chen, H., Feng, W., Chen, K., Qiu, X., Xu, H., Mao, G., Zhao, T., Ding, Y., Wu, X. (2019). Transcriptomic analysis reveals potential mechanisms of toxicity in a combined exposure to dibutyl phthalate and diisobutyl phthalate in zebrafish ( <i>Danio rerio</i> ) ovary. <i>Aquatic Toxicology</i> 216:105290.	<b>12</b>
<b>5083619</b>	Haggard, D. E., Noyes, P. D., Waters, K. M., Tanguay, R. L. (2018). Transcriptomic and phenotypic profiling in developing zebrafish exposed to thyroid hormone receptor agonists. <i>Reproductive Toxicology</i> 77:80-93.	<b>16</b>
<b>8635978</b>	Thomas, D. G., Shankaran, H., Truong, L., Tanguay, R. L., Waters, K. M. (2019). Time-dependent behavioral data from zebrafish reveals novel signatures of chemical toxicity using point of departure analysis. <i>Computational Toxicology</i> 9:50-60.	<b>17</b>
<b>8591199</b>	Truong, L., Reif, D. M., Mary, L. S., Geier, M. C., Truong, H. D., Tanguay, R. L. (2014). Multidimensional in vivo hazard assessment using zebrafish. <i>Toxicological Sciences</i> 137(1):212-233.	<b>25</b>
	<i>Pimephales promelas</i> (Fathead Minnow)	
<b>11581733</b>	Bencic, D. C., Flick, R. W., Bell, M. E., Henderson, W. M., Huang, W., Purucker, S. T., Glinski, D. A., Blackwell, B. R., Christen, C. H., Stacy, E. H., Biales, A. D. (2024). A multiomics study following acute exposures to phthalates in larval fathead minnows ( <i>Pimephales promelas</i> ) – The potential application of omics data in risk evaluations under TSCA (internal use only).	<b>35</b>
<b>Habitat: Terrestrial Taxa: Vascular plants</b>		
	<i>Nicotiana tabacum</i> (Tobacco)	
<b>5627041</b>	Deng, J., Zhang, Y., Hu, J., Jiao, J., Hu, F., Li, H., Zhang, S. (2017). Autotoxicity of phthalate esters in tobacco root exudates: Effects on seed germination and seedling growth. <i>Pedosphere</i> 27(6):1073-1082.	<b>39</b>
<b>792357</b>	Jia, Z. H., Yi, J. H., Su, Y. R., Shen, H. (2011). Autotoxic substances in the root exudates from continuous tobacco cropping. <i>Allelopathy Journal</i> 27(1):87-96.	<b>39</b>
<b>Habitat: Terrestrial Taxa: Worms</b>		
	<i>Caenorhabditis elegans</i> (Nematode)	

<b>2215375</b>	Tseng, I. L., Yang, Y. F., Yu, C. W., Li, W. H., Liao, C., V.H. (2013). Phthalates induce neurotoxicity affecting locomotor and thermotactic behaviors and AFD neurons through oxidative stress in <i>Caenorhabditis elegans</i> . PLoS ONE 8(12):e82657.	<b>41</b>
----------------	---	-----------

**Habitat: Terrestrial Taxa: Arthropods**

*Lasius niger* (Black Garden Ant)

<b>2347468</b>	Lenoir, A., Touchard, A., Devers, S., Christidès, J. P., Boulay, R., Cuvillier-Hot, V. (2014). Ant cuticular response to phthalate pollution. Environmental Science and Pollution Research 21(23):13446-13451.	<b>43</b>
----------------	--	-----------

## Analog Chemical Data

**Habitat: Aquatic Taxa: Fish**

*Cyprinodon variegatus* (Sheepshead Minnow)

<b>1321996</b>	Adams, W. J., Biddinger, G. R., Robillard, K. A., Gorsuch, J. W. (1995). A summary of the acute toxicity of 14 phthalate esters to representative aquatic organisms. Environmental Toxicology and Chemistry 14(9):1569-1574.	<b>45</b>
----------------	--	-----------

*Danio rerio* (Zebra Danio)

<b>2298079</b>	Chen, X., Xu, S., Tan, T., Lee, S. T., Cheng, S. H., Lee, F., F.W., Xu, L., S.J., Ho, K. C. (2014). Toxicity and estrogenic endocrine disrupting activity of phthalates and their mixtures. International Journal of Environmental Research and Public Health 11(3):3156-3168.	<b>45</b>
----------------	--	-----------

*Lepomis macrochirus* (Bluegill)

<b>1321996</b>	Adams, W. J., Biddinger, G. R., Robillard, K. A., Gorsuch, J. W. (1995). A summary of the acute toxicity of 14 phthalate esters to representative aquatic organisms. Environmental Toxicology and Chemistry 14(9):1569-1574.	<b>46</b>
----------------	--	-----------

<b>1316201</b>	Bionomics,, EG&G (1983). Exhibit III: Acute toxicity of thirteen phthalate esters to bluegill ( <i>Lepomis macrochirus</i> ).	<b>46</b>
----------------	---	-----------

<b>18064</b>	Buccafusco, R. J., Ells, S. J., Leblanc, G. A. (1981). Acute toxicity of priority pollutants to bluegill ( <i>Lepomis macrochirus</i> ). Bulletin of Environmental Contamination and Toxicology 26(4):446-452.	<b>48</b>
--------------	--	-----------

*Oncorhynchus mykiss* (Rainbow Trout)

<b>1321996</b>	Adams, W. J., Biddinger, G. R., Robillard, K. A., Gorsuch, J. W. (1995). A summary of the acute toxicity of 14 phthalate esters to representative aquatic organisms. Environmental Toxicology and Chemistry 14(9):1569-1574.	<b>48</b>
----------------	--	-----------

<b>5530771</b>	Bionomics,, EG&G (1983). Acute toxicity of fourteen phthalate esters to rainbow trout ( <i>Salmo gairdneri</i> ) under flow-through conditions (final report) report no BW-83-3-1373.	<b>49</b>
----------------	---	-----------

<b>6571362</b>	EnviroSystem, (1991). Early life-stage toxicity of di-n-butyl phthalate (DnBP) to the rainbow trout ( <i>Oncorhynchus mykiss</i> ) under flow-through conditions.	<b>51</b>
----------------	---	-----------

*Oryzias latipes* (Japanese Medaka)

<b>10064186</b>	EAG Laboratories, (2018). Dibutyl phthalate: Medaka extended one generation reproduction test (final report).	<b>58</b>
-----------------	---	-----------

*Oryzias melastigma* (Indian Medaka)

<b>2298079</b>	Chen, X., Xu, S., Tan, T., Lee, S. T., Cheng, S. H., Lee, F., F.W., Xu, L., S.J., Ho, K. C. (2014). Toxicity and estrogenic endocrine disrupting activity of phthalates and their mixtures. International Journal of Environmental Research and Public Health 11(3):3156-3168.	<b>107</b>
----------------	--	------------

*Pimephales promelas* (Fathead Minnow)

<b>1321996</b>	Adams, W. J., Biddinger, G. R., Robillard, K. A., Gorsuch, J. W. (1995). A summary of the acute toxicity of 14 phthalate esters to representative aquatic organisms. Environmental Toxicology and Chemistry 14(9):1569-1574.	<b>107</b>
----------------	--	------------

<b>1336024</b>	Mccarthy, J. F., Whitmore, D. K. (1985). Chronic toxicity of di-n-butyl and di-n-octyl phthalate to daphnia-magna and the fathead minnow. Environmental Toxicology and Chemistry 4(2):167-179.	<b>108</b>
<b>Habitat: Aquatic Taxa: Arthropods</b>		
<i>Americamysis bahia</i> (Opossum Shrimp)		
<b>1321996</b>	Adams, W. J., Biddinger, G. R., Robillard, K. A., Gorsuch, J. W. (1995). A summary of the acute toxicity of 14 phthalate esters to representative aquatic organisms. Environmental Toxicology and Chemistry 14(9):1569-1574.	<b>110</b>
<i>Arthropoda</i> (Arthropod Phylum)		
<b>5495608</b>	Tagatz, M. E., Deans, C. H., Moore, J. C., Plaia, G. R. (1983). Alterations in composition of field-developed and laboratory-developed estuarine benthic communities exposed to di-normal-butyl phthalate. Aquatic Toxicology 3(3):239-248.	<b>110</b>
<i>Chironomus plumosus</i> (Midge)		
<b>1332972</b>	Streufort, J. M. (1978). Some effects of two phthalic acid esters on the life cycle of the midge ( <i>Chironomus plumosus</i> ).	<b>112</b>
<i>Chironomus tentans</i> (Midge)		
<b>679311</b>	Call, D. J., Cox, D. A., Geiger, D. L., Genisot, K. I., Markee, T. P., Brooke, L. T., Polkinghorne, C. N., Vandeventer, F. A., Gorsuch, J. W., Robillard, K. A., Parkerton, T. F., Reiley, M. C., Ankley, G. T., Mount, D. R. (2001). An assessment of the toxicity of phthalate esters to freshwater benthos. 2. Sediment exposures. Environmental Toxicology and Chemistry 20(8):1805-1815.	<b>115</b>
<i>Corophium acherusicum</i> (Scud)		
<b>5495608</b>	Tagatz, M. E., Deans, C. H., Moore, J. C., Plaia, G. R. (1983). Alterations in composition of field-developed and laboratory-developed estuarine benthic communities exposed to di-normal-butyl phthalate. Aquatic Toxicology 3(3):239-248.	<b>135</b>
<i>Daphnia magna</i> (Water Flea)		
<b>1321996</b>	Adams, W. J., Biddinger, G. R., Robillard, K. A., Gorsuch, J. W. (1995). A summary of the acute toxicity of 14 phthalate esters to representative aquatic organisms. Environmental Toxicology and Chemistry 14(9):1569-1574.	<b>136</b>
<b>1336024</b>	Mccarthy, J. F., Whitmore, D. K. (1985). Chronic toxicity of di-n-butyl and di-n-octyl phthalate to daphnia-magna and the fathead minnow. Environmental Toxicology and Chemistry 4(2):167-179.	<b>136</b>
<b>4829279</b>	Wei, J., Shen, Q., Ban, Y., Wang, Y., Shen, C., Wang, T., Zhao, W., Xie, X. (2018). Characterization of Acute and Chronic Toxicity of DBP to <i>Daphnia magna</i> . Bulletin of Environmental Contamination and Toxicology 101(2):214-221.	<b>139</b>
<i>Hyaella azteca</i> (Scud)		
<b>679311</b>	Call, D. J., Cox, D. A., Geiger, D. L., Genisot, K. I., Markee, T. P., Brooke, L. T., Polkinghorne, C. N., Vandeventer, F. A., Gorsuch, J. W., Robillard, K. A., Parkerton, T. F., Reiley, M. C., Ankley, G. T., Mount, D. R. (2001). An assessment of the toxicity of phthalate esters to freshwater benthos. 2. Sediment exposures. Environmental Toxicology and Chemistry 20(8):1805-1815.	<b>141</b>
<i>Nitocra spinipes</i> (Harpacticoid Copepod)		
<b>51937</b>	Linden, E., Bengtsson, B. E., Svanberg, O., Sundstrom, G. (1979). The acute toxicity of 78 chemicals and pesticide formulations against two brackish water organisms, the bleak ( <i>Alburnus alburnus</i> ) and the harpacticoid <i>Nitocra spinipes</i> . Chemosphere 8(11-12):843-851.	<b>157</b>
<i>Paratanytarsus parthenogeneticus</i> (Midge)		
<b>1321996</b>	Adams, W. J., Biddinger, G. R., Robillard, K. A., Gorsuch, J. W. (1995). A summary of the acute toxicity of 14 phthalate esters to representative aquatic organisms. Environmental Toxicology and Chemistry 14(9):1569-1574.	<b>157</b>
<b>1316219</b>	Bionomics,, EG&G (1984). Acute toxicity of twelve phthalate esters to <i>Paratanytarsus parthenogenica</i> (final report) report no BW-83-6-1424.	<b>158</b>
<b>Habitat: Aquatic Taxa: Non-vascular plants</b>		
<i>Scenedesmus sp.</i> (Green Algae)		

<b>6967432</b>	Cunha, C., Paulo, J., Faria, M., Kaufmann, M., Cordeiro, N. (2019). Ecotoxicological and biochemical effects of environmental concentrations of the plastic-bond pollutant dibutyl phthalate on <i>Scenedesmus</i> sp. <i>Aquatic Toxicology</i> 215:105281.	<b>159</b>
	<i>Selenastrum capricornutum</i> (Green Algae)	
<b>1321996</b>	Adams, W. J., Biddinger, G. R., Robillard, K. A., Gorsuch, J. W. (1995). A summary of the acute toxicity of 14 phthalate esters to representative aquatic organisms. <i>Environmental Toxicology and Chemistry</i> 14(9):1569-1574.	<b>164</b>
	<b>Habitat: Aquatic Taxa: Mollusks</b>	
	<i>Mollusca</i> (Mollusk Phylum)	
<b>5495608</b>	Tagatz, M. E., Deans, C. H., Moore, J. C., Plaia, G. R. (1983). Alterations in composition of field-developed and laboratory-developed estuarine benthic communities exposed to di-normal-butyl phthalate. <i>Aquatic Toxicology</i> 3(3):239-248.	<b>165</b>
	<b>Habitat: Aquatic Taxa: Unknown</b>	
	<i>Animalia</i> (Animal Kingdom)	
<b>5495608</b>	Tagatz, M. E., Deans, C. H., Moore, J. C., Plaia, G. R. (1983). Alterations in composition of field-developed and laboratory-developed estuarine benthic communities exposed to di-normal-butyl phthalate. <i>Aquatic Toxicology</i> 3(3):239-248.	<b>168</b>
	<i>Chordata</i> (Chordate Phylum)	
<b>5495608</b>	Tagatz, M. E., Deans, C. H., Moore, J. C., Plaia, G. R. (1983). Alterations in composition of field-developed and laboratory-developed estuarine benthic communities exposed to di-normal-butyl phthalate. <i>Aquatic Toxicology</i> 3(3):239-248.	<b>171</b>
	<b>Habitat: Aquatic Taxa: Other Invertebrates</b>	
	<i>Actiniaria</i> (Anemone Order)	
<b>5495608</b>	Tagatz, M. E., Deans, C. H., Moore, J. C., Plaia, G. R. (1983). Alterations in composition of field-developed and laboratory-developed estuarine benthic communities exposed to di-normal-butyl phthalate. <i>Aquatic Toxicology</i> 3(3):239-248.	<b>173</b>
	<i>Echinodermata</i> (Echinoderm Phylum)	
<b>5495608</b>	Tagatz, M. E., Deans, C. H., Moore, J. C., Plaia, G. R. (1983). Alterations in composition of field-developed and laboratory-developed estuarine benthic communities exposed to di-normal-butyl phthalate. <i>Aquatic Toxicology</i> 3(3):239-248.	<b>174</b>
	<i>Molgula manhattensis</i> (Sea Squirt)	
<b>5495608</b>	Tagatz, M. E., Deans, C. H., Moore, J. C., Plaia, G. R. (1983). Alterations in composition of field-developed and laboratory-developed estuarine benthic communities exposed to di-normal-butyl phthalate. <i>Aquatic Toxicology</i> 3(3):239-248.	<b>175</b>
	<i>Ophiophragmus filograneus</i> (Brittlestar)	
<b>5495608</b>	Tagatz, M. E., Deans, C. H., Moore, J. C., Plaia, G. R. (1983). Alterations in composition of field-developed and laboratory-developed estuarine benthic communities exposed to di-normal-butyl phthalate. <i>Aquatic Toxicology</i> 3(3):239-248.	<b>175</b>
	<b>Habitat: Aquatic Taxa: Worms</b>	
	<i>Annelida</i> (Segmented Worm Phylum)	
<b>5495608</b>	Tagatz, M. E., Deans, C. H., Moore, J. C., Plaia, G. R. (1983). Alterations in composition of field-developed and laboratory-developed estuarine benthic communities exposed to di-normal-butyl phthalate. <i>Aquatic Toxicology</i> 3(3):239-248.	<b>177</b>
	<i>Nemertea</i> (Proboscis Worm Phylum)	
<b>5495608</b>	Tagatz, M. E., Deans, C. H., Moore, J. C., Plaia, G. R. (1983). Alterations in composition of field-developed and laboratory-developed estuarine benthic communities exposed to di-normal-butyl phthalate. <i>Aquatic Toxicology</i> 3(3):239-248.	<b>179</b>
	<b>Data Extraction of Rodent Data for the Application of Environmental Hazard</b>	<b>180</b>
<b>680389</b>	Saillenfait, A. M., Sabate, J. P., Gallissot, F. (2006). Developmental toxic effects of diisobutyl phthalate, the methyl-branched analogue of di-n-butyl phthalate, administered by gavage to rats. <i>Toxicology Letters</i> 165(1):39-46.	<b>180</b>

<b>680390</b>	Saillenfait, A. M., Sabate, J. P., Gallissot, F. (2008). Diisobutyl phthalate impairs the androgen-dependent reproductive development of the male rat. <i>Reproductive Toxicology</i> 26(2):107-115.	<b>180</b>
<b>Human Health Hazard Animal Toxicology</b>		<b>181</b>
<b>Diisobutyl Phthalate</b>		
<b>Reproductive/Developmental</b>		
<b>9419406</b>	Gray, L. E., Jr, Lambright, C. S., Conley, J. M., Evans, N., Furr, J. R., Hannas, B. R., Wilson, V. S., Sampson, H., Foster, P. M. D. (2021). Genomic and Hormonal Biomarkers of Phthalate-Induced Male Rat Reproductive Developmental Toxicity Part II: A Targeted RT-qPCR Array Approach That Defines a Unique Adverse Outcome Pathway. <i>Toxicological Sciences</i> 182(2):195-214.	<b>181</b>
<b>788239</b>	Hannas, B. R., Lambright, C. S., Furr, J., Howdeshell, K. L., Wilson, V. S., Gray, L. E. (2011). Dose-response assessment of fetal testosterone production and gene expression levels in rat testes following in utero exposure to diethylhexyl phthalate, diisobutyl phthalate, diisoheptyl phthalate, and diisononyl phthalate. <i>Toxicological Sciences</i> 123(1):206-216.	<b>181</b>
<b>Human Health Hazard Epidemiology</b>		<b>182</b>
<b>Diisobutyl Phthalate</b>		
<b>Metabolite: Mono-isobutyl phthalate (MiBP)</b>		
<b>5039985</b>	Balalian, A. A., Whyatt, R. M., Liu, X., Insel, B. J., Rauh, V. A., Herbstman, J., Factor-Litvak, P. (2019). Prenatal and childhood exposure to phthalates and motor skills at age 11 years. <i>Environmental Research</i> 171:416-427.	<b>183</b>
<b>10294569</b>	Burns, J. S., Sergeyev, O., Lee, M. M., Williams, P. L., Mínguez-Alarcón, L., Plaku-Alakbarova, B., Sokolov, S., Kovalev, S., Koch, H. M., Lebedev, A. T., Hauser, R., Korrick, S. A., Study, R.C. (2022). Associations of prepubertal urinary phthalate metabolite concentrations with pubertal onset among a longitudinal cohort of boys. <i>Environmental Research</i> 212(Pt A):113218.	<b>185</b>
<b>5041222</b>	Chen, J., Zhou, X., Zhang, H., Liu, Y., Cao, C., Dong, R., Yuan, Y., Wang, M., Lu, Y., Wu, M., Li, S., Chen, B. (2019). Association between urinary concentration of phthalate metabolites and impaired renal function in Shanghai adults. <i>Environmental Pollution</i> 245:149-162.	<b>185</b>
<b>5043528</b>	Chin, H. B., Jukic, A. M., Wilcox, A. J., Weinberg, C. R., Ferguson, K. K., Calafat, A. M., McConnaughey, D. R., Baird, D. D. (2019). Association of urinary concentrations of phthalate metabolites and bisphenol A with early pregnancy endpoints. <i>Environmental Research</i> 168:254-260.	<b>186</b>
<b>8010273</b>	Choi, G., Villanger, G. D., Drover, M., S.S., Sakhi, A. K., Thomsen, C., Nethery, R. C., Zeiner, P., Knudsen, G. P., Reichborn-Kjennerud, T., Øvergaard, K. R., Herring, A. H., Skogan, A. H., Biele, G., Aase, H., Engel, S. M. (2021). Prenatal phthalate exposures and executive function in preschool children. <i>Environment International</i> 149:106403.	<b>187</b>
<b>4728651</b>	Dales, R. E., Kauri, L. M., Cakmak, S. (2018). The associations between phthalate exposure and insulin resistance, $\beta$ -cell function and blood glucose control in a population-based sample. <i>Science of the Total Environment</i> 612:1287-1292.	<b>187</b>
<b>8204339</b>	Daniel, S., Balalian, A. A., Insel, B. J., Liu, X., Whyatt, R. M., Calafat, A. M., Rauh, V. A., Perera, F. P., Hoepner, L. A., Herbstman, J., Factor-Litvak, P. (2020). Prenatal and early childhood exposure to phthalates and childhood behavior at age 7 years. <i>Environment International</i> 143:105894.	<b>188</b>
<b>5559180</b>	Dong, R., Wu, Y., Chen, J., Wu, M., Li, S., Chen, B. (2019). Lactational exposure to phthalates impaired the neurodevelopmental function of infants at 9months in a pilot prospective study. <i>Chemosphere</i> 226:351-359.	<b>190</b>
<b>9387317</b>	Dries, v.d., M. A., Guxens, M., Spaan, S., Ferguson, K. K., Philips, E., Santos, S., Jaddoe, V., V.W., Ghassabian, A., Trasande, L., Tiemeier, H., Pronk, A. (2020). Phthalate and bisphenol exposure during pregnancy and offspring nonverbal IQ. <i>Environmental Health Perspectives</i> 128(7):77009.	<b>192</b>
<b>5499698</b>	Duan, Y., Sun, H., Han, L., Chen, L. (2019). Association between phthalate exposure and glycosylated hemoglobin, fasting glucose, and type 2 diabetes mellitus: A case-control study in China. <i>Science of the Total Environment</i> 670:41-49.	<b>192</b>

<b>5512126</b>	Durmaz, E., Erkekoglu, P., Asci, A., Akçurin, S., Bircan, I., Kocer-Gumusel, B. (2018). Urinary phthalate metabolite concentrations in girls with premature thelarche. <i>Environmental Toxicology and Pharmacology</i> 59:172-181.	<b>193</b>
<b>6717805</b>	England-Mason, G., Martin, J. W., Macdonald, A., Kinniburgh, D., Giesbrecht, G. F., Letourneau, N., Dewey, D. (2020). Similar names, different results: Consistency of the associations between prenatal exposure to phthalates and parent-ratings of behavior problems in preschool children. <i>Environment International</i> 142:105892.	<b>195</b>
<b>9354255</b>	Evans, S. F., Raymond, S., Sethuram, S., Barrett, E. S., Bush, N. R., Nguyen, R., Sathyanarayana, S., Swan, S. H. (2021). Associations between prenatal phthalate exposure and sex-typed play behavior in preschool age boys and girls. <i>Environmental Research</i> 192:110264.	<b>202</b>
<b>5043449</b>	Harley, K. G., Berger, K. P., Kogut, K., Parra, K., Lustig, R. H., Greenspan, L. C., Calafat, A. M., Ye, X., Eskenazi, B. (2019). Association of phthalates, parabens and phenols found in personal care products with pubertal timing in girls and boys. <i>Human Reproduction</i> 34(1):109-117.	<b>204</b>
<b>4728500</b>	Huang, H. B., Kuo, P. L., Chang, J. W., Jaakkola, K., J.J., Liao, K. W., Huang, P. C. (2018). Longitudinal assessment of prenatal phthalate exposure on serum and cord thyroid hormones homeostasis during pregnancy - Tainan birth cohort study (TBCS). <i>Science of the Total Environment</i> 619-620(Elsevier):1058-1065.	<b>205</b>
<b>6815846</b>	Hyland, C., Mora, A. M., Kogut, K., Calafat, A. M., Harley, K., Deardorff, J., Holland, N., Eskenazi, B., Sagiv, S. K. (2019). Prenatal exposure to phthalates and neurodevelopment in the CHAMACOS cohort.	<b>206</b>
<b>4728454</b>	James-Todd, T. M., Chiu, Y. H., Messerlian, C., Mínguez-Alarcón, L., Ford, J. B., Keller, M., Petrozza, J., Williams, P. L., Ye, X., Calafat, A. M., Hauser, R., Team, E.S. (2018). Trimester-specific phthalate concentrations and glucose levels among women from a fertility clinic. <i>Environmental Health</i> 17(1):55.	<b>207</b>
<b>5053633</b>	Li, N., Papandonatos, G. D., Calafat, A. M., Yoltan, K., Lanphear, B. P., Chen, A., Braun, J. M. (2019). Identifying periods of susceptibility to the impact of phthalates on children's cognitive abilities. <i>Environmental Research</i> 172:604-614.	<b>207</b>
<b>7978907</b>	Muerkøster, A. P., Frederiksen, H., Juul, A., Andersson, A. M., Jensen, R. C., Grintborg, D., Kyhl, H. B., Andersen, M. S., Timmermann, G., C.A., Jensen, T. K. (2020). Maternal phthalate exposure associated with decreased testosterone/LH ratio in male offspring during mini-puberty. <i>Odense Child Cohort. Environment International</i> 144:106025.	<b>208</b>
<b>4728408</b>	Parada, H., Gammon, M. D., Chen, J., Calafat, A. M., Neugut, A. I., Santella, R. M., Wolff, M. S., Teitelbaum, S. L. (2018). Urinary Phthalate Metabolite Concentrations and Breast Cancer Incidence and Survival following Breast Cancer: The Long Island Breast Cancer Study Project. <i>Environmental Health Perspectives</i> 126(4):47013.	<b>209</b>
<b>8350115</b>	Patti, M. A., Newschaffer, C., Eliot, M., Hamra, G. B., Chen, A., Croen, L. A., Fallin, M. D., Hertz-Picciotto, I., Kalloo, G., Khoury, J. C., Lanphear, B. P., Lyall, K., Yoltan, K., Braun, J. M. (2021). Gestational exposure to phthalates and social responsiveness scores in children using quantile regression: The EARLI and home studies. <i>International Journal of Environmental Research and Public Health</i> 18(3):17-Jan.	<b>210</b>
<b>5043451</b>	Rodríguez-Carmona, Y., Cantoral, A., Trejo-Valdivia, B., Téllez-Rojo, M. M., Svensson, K., Peterson, K. E., Meeker, J. D., Schnaas, L., Solano, M., Watkins, D. J. (2019). Phthalate exposure during pregnancy and long-term weight gain in women. <i>Environmental Research</i> 169:26-32.	<b>211</b>
<b>5432947</b>	Su, T. C., Hwang, J. J., Sun, C. W., Wang, S. L. (2019). Urinary phthalate metabolites, coronary heart disease, and atherothrombotic markers. <i>Ecotoxicology and Environmental Safety</i> 173(Elsevier):37-44.	<b>211</b>
<b>8348423</b>	Watkins, D. J., Meeker, J. D., Tamayo-Ortiz, M., Sánchez, B. N., Schnaas, L., Peterson, K. E., Téllez-Rojo, M. M. (2021). Gestational and peripubertal phthalate exposure in relation to attention performance in childhood and adolescence. <i>Environmental Research</i> 196:110911.	<b>212</b>
<b>4728873</b>	Yang, T. C., Peterson, K. E., Meeker, J. D., Sánchez, B. N., Zhang, Z., Cantoral, A., Solano, M., Tellez-Rojo, M. M. (2018). Exposure to Bisphenol A and phthalates metabolites in the third trimester of pregnancy and BMI trajectories. <i>Pediatric Obesity</i> 13(9):550-557.	<b>213</b>
<b>Metabolite: Mono-isobutyl phthalate (MiBP); Mono-hydroxyisobutyl phthalate (MHBP)</b>		
<b>5043615</b>	Reeves, K. W., Santana, M. D., Manson, J. E., Hankinson, S. E., Zoeller, R. T., Bigelow, C., Sturgeon, S. R., Spiegelman, D., Tinker, L., Luo, J., Chen, B., Meliker, J., Bonner, M. R., Cote, M. L., Cheng, T. D., Calafat, A. M. (2019). Urinary phthalate biomarker concentrations and postmenopausal breast cancer risk. <i>Journal of the National Cancer Institute</i> 111(10):1059-1067.	<b>214</b>
<b>5043457</b>	Shin, H. M., Schmidt, R. J., Tancredi, D., Barkoski, J., Ozonoff, S., Bennett, D. H., Hertz-Picciotto, I. (2018). Prenatal exposure to phthalates and autism spectrum disorder in the MARBLES study. <i>Environmental Health</i> 17(1):85.	<b>214</b>



9419487	Shoaff, J. R., Coull, B., Weuve, J., Bellinger, D. C., Calafat, A. M., Schantz, S. L., Korrick, S. A. (2020). Association of exposure to endocrine-disrupting chemicals during adolescence with attention-deficit/hyperactivity disorder-related behaviors. <i>JAMA Network Open</i> 3(8):e2015041.	215
5043589	Zota, A. R., Geller, R. J., Calafat, A. M., Marfori, C. Q., Baccarelli, A. A., Moawad, G. N. (2019). Phthalates exposure and uterine fibroid burden among women undergoing surgical treatment for fibroids: a preliminary study. <i>Fertility and Sterility</i> 111(1):112-121.	216
<b>Metabolite: Mono-isobutyl phthalate (MiBP)</b>		
7978495	Choi, G., Keil, A. P., Villanger, G. D., Richardson, D. B., Daniels, J. L., Hoffman, K., Sakhi, A. K., Thomsen, C., Herring, A. H., Drover, M., S.S., Nethery, R., Aase, H., Engel, S. M. (2021). Pregnancy exposure to common-detect organophosphate esters and phthalates and maternal thyroid function. <i>Science of the Total Environment</i> 782:146709.	217
5433529	Gaston, S. A., Tulve, N. S. (2019). Urinary phthalate metabolites and metabolic syndrome in U.S. adolescents: Cross-sectional results from the National Health and Nutrition Examination Survey (2003-2014) data. <i>International Journal of Hygiene and Environmental Health</i> 222(2):195-204.	219
5514974	Heggeseth, B. C., Holland, N., Eskenazi, B., Kogut, K., Harley, K. G. (2019). Heterogeneity in childhood body mass trajectories in relation to prenatal phthalate exposure. <i>Environmental Research</i> 175:22-33.	220
5613207	Santana, Díaz, M. V., Hankinson, S. E., Bigelow, C., Sturgeon, S. R., Zoeller, R. T., Tinker, L., Manson, E., J.A., Calafat, A. M., Meliker, J. R., Reeves, K. W. (2019). Urinary concentrations of phthalate biomarkers and weight change among postmenopausal women: a prospective cohort study. <i>Environmental Health</i> 18(1):20.	221
8351761	Sarigiannis, D. A., Papaioannou, N., Handakas, E., Anesti, O., Polanska, K., Hanke, W., Salifoglou, A., Gabriel, C., Karakitsios, S. (2021). Neurodevelopmental exposome: The effect of in utero co-exposure to heavy metals and phthalates on child neurodevelopment. <i>Environmental Research</i> 197:110949.	222
4829218	Shi, W., Lin, Z., Liao, C., Zhang, J., Liu, W., Wang, X., Cai, J., Zou, Z., Wang, H., Norback, D., Kan, H., Huang, C., Zhao, Z. (2018). Urinary phthalate metabolites in relation to childhood asthmatic and allergic symptoms in Shanghai. <i>Environment International</i> 121(Pt 1):276-286.	223
4728712	Soomro, M. H., Baiz, N., Philippat, C., Vernet, C., Siroux, V., Maesano, Nichole, C., Sanyal, S., Slama, R., Bornehag, C. G., Annesi-Maesano, I. (2018). Prenatal exposure to phthalates and the development of eczema phenotypes in male children: results from the EDEN mother-child cohort study. <i>Environmental Health Perspectives</i> 126(2):27002.	226
5041285	Vafeiadi, M., Myridakis, A., Roumeliotaki, T., Margetaki, K., Chalkiadaki, G., Dermitzaki, E., Venihaki, M., Sarri, K., Vassilaki, M., Leventakou, V., Stephanou, E. G., Kogevinas, M., Chatzi, L. (2018). Association of Early Life Exposure to Phthalates With Obesity and Cardiometabolic Traits in Childhood: Sex Specific Associations. <i>Frontiers in Public Health</i> 6(NOV):327.	227
<b>Metabolite: mono-isobutyl phthalate (MiBP)</b>		
4829246	Malits, J., Attina, T. M., Karthikraj, R., Kannan, K., Naidu, M., Furth, S., Warady, B. A., Vento, S., Trachtman, H., Trasande, L. (2018). Renal function and exposure to bisphenol A and phthalates in children with chronic kidney disease. <i>Environmental Research</i> 167:575-582.	229
<b>Metabolite: Mono-isobutyl phthalate (MiBP); monohydroxyisobutyl phthalate (MHBP)</b>		
5743382	Machtinger, R., Mansur, A., Baccarelli, A. A., Calafat, A. M., Gaskins, A. J., Racowsky, C., Adir, M., Hauser, R. (2018). Urinary concentrations of biomarkers of phthalates and phthalate alternatives and IVF outcomes. <i>Environment International</i> 111:23-31.	230

### 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
84-69-5	96 Hour(s), (96 Hour(s))	<i>Nitocra spinipes</i> (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 (3.0 (2.5-3.6) mg/L)	Mortality	Medium	51937

\* 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
84-69-5	24-168 Hour(s), (168 Hour(s))	<i>Karenia brevis</i> (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

\* 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: 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
84-69-5	30 Day(s), (30 Day(s))	<i>Danio rerio</i> (Zebra Danio), Adult, Female, Laboratory (FROM THE CHINA ZEBRAFISH RE-SOURCE CENTER, WUHAN, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 4.7-8.6 ug/L / 62.6-97.3 ug/L / 785.7-1003.7 ug/L	Growth (Morphology- Organ weight in relationship to body weight, Response Site: Gonad(s))	NOEC (62.6-97.3 ug/L)	Reproductive/Teratogenic	High	6959356
84-69-5	30 Day(s), (30 Day(s))	<i>Danio rerio</i> (Zebra Danio), Adult, Female, Laboratory (FROM THE CHINA ZEBRAFISH RE-SOURCE CENTER, WUHAN, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 4.7-8.6 ug/L / 62.6-97.3 ug/L / 785.7-1003.7 ug/L	Reproduction (Reproduction- Fully developed oocytes, Response Site: Not reported)	NOEC (62.6-97.3 ug/L)	Reproductive/Teratogenic	High	6959356
84-69-5	30 Day(s), (30 Day(s))	<i>Danio rerio</i> (Zebra Danio), Adult, Female, Laboratory (FROM THE CHINA ZEBRAFISH RE-SOURCE CENTER, WUHAN, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 4.7-8.6 ug/L / 62.6-97.3 ug/L / 785.7-1003.7 ug/L	Reproduction (Reproduction- Previtellogenic oocyte, Response Site: Not reported)	LOEC (785.7-1003.7 ug/L)	Reproductive/Teratogenic	High	6959356
84-69-5	30 Day(s), (30 Day(s))	<i>Danio rerio</i> (Zebra Danio), Adult, Female, Laboratory (FROM THE CHINA ZEBRAFISH RE-SOURCE CENTER, WUHAN, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 4.7-8.6 ug/L / 62.6-97.3 ug/L / 785.7-1003.7 ug/L	Cellular (Genetics-Gene expression, Response Site: Blood)	NR (785.7-1003.7 ug/L)	Mechanistic: Cell signaling/function; Reproductive/Teratogenic	High	6959356

Continued on next page ...

...continued from previous page

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
84-69-5	30 Day(s), (30 Day(s))	<i>Danio rerio</i> (Zebra Danio), Adult, Female, Laboratory (FROM THE CHINA ZEBRAFISH RE-SOURCE CENTER, WUHAN, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 4.7-8.6 ug/L / 62.6-97.3 ug/L / 785.7-1003.7 ug/L	Growth (Growth-Condition index, Response Site: Whole organism)	NOEC (785.7-1003.7 ug/L)	Development/Growth	High	6959356
84-69-5	30 Day(s), (30 Day(s))	<i>Danio rerio</i> (Zebra Danio), Adult, Female, Laboratory (FROM THE CHINA ZEBRAFISH RE-SOURCE CENTER, WUHAN, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 4.7-8.6 ug/L / 62.6-97.3 ug/L / 785.7-1003.7 ug/L	Reproduction (Reproduction-Previtellogenic oocyte, Response Site: Not reported)	NOEC (62.6-97.3 ug/L)	Reproductive/Teratogenic	High	6959356
84-69-5	30 Day(s), (30 Day(s))	<i>Danio rerio</i> (Zebra Danio), Adult, Female, Laboratory (FROM THE CHINA ZEBRAFISH RE-SOURCE CENTER, WUHAN, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 4.7-8.6 ug/L / 62.6-97.3 ug/L / 785.7-1003.7 ug/L	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Plasma)	NOEC (62.6-97.3 ug/L)	Mechanistic: Cell signaling/function; Reproductive/Teratogenic	High	6959356
84-69-5	30 Day(s), (30 Day(s))	<i>Danio rerio</i> (Zebra Danio), Adult, Female, Laboratory (FROM THE CHINA ZEBRAFISH RE-SOURCE CENTER, WUHAN, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 4.7-8.6 ug/L / 62.6-97.3 ug/L / 785.7-1003.7 ug/L	Growth (Morphology-Organ weight in relationship to body weight, Response Site: Gonad(s))	LOEC (785.7-1003.7 ug/L)	Reproductive/Teratogenic	High	6959356

Continued on next page ...

...continued from previous page

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
84-69-5	30 Day(s), (30 Day(s))	<i>Danio rerio</i> (Zebra Danio), Adult, Female, Laboratory (FROM THE CHINA ZEBRAFISH RE-SOURCE CENTER, WUHAN, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 4.7-8.6 ug/L / 62.6-97.3 ug/L / 785.7-1003.7 ug/L	Reproduction (Reproduction-Fully developed oocytes, Response Site: Not reported)	LOEC (785.7-1003.7 ug/L)	Reproductive/Teratogenic	High	6959356
84-69-5	30 Day(s), (30 Day(s))	<i>Danio rerio</i> (Zebra Danio), Adult, Female, Laboratory (FROM THE CHINA ZEBRAFISH RE-SOURCE CENTER, WUHAN, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 4.7-8.6 ug/L / 62.6-97.3 ug/L / 785.7-1003.7 ug/L	Reproduction (Reproduction-Cortical alveoli oocyte, Response Site: Not reported)	LOEC (785.7-1003.7 ug/L)	Reproductive/Teratogenic	High	6959356
84-69-5	30 Day(s), (30 Day(s))	<i>Danio rerio</i> (Zebra Danio), Adult, Female, Laboratory (FROM THE CHINA ZEBRAFISH RE-SOURCE CENTER, WUHAN, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 4.7-8.6 ug/L / 62.6-97.3 ug/L / 785.7-1003.7 ug/L	Biochemical (Hormone(s)-Testosterone to estradiol ratio, Response Site: Plasma)	NOEC (62.6-97.3 ug/L)	Mechanistic: Cell signaling/function; Reproductive/Teratogenic	High	6959356
84-69-5	30 Day(s), (30 Day(s))	<i>Danio rerio</i> (Zebra Danio), Adult, Female, Laboratory (FROM THE CHINA ZEBRAFISH RE-SOURCE CENTER, WUHAN, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 4.7-8.6 ug/L / 62.6-97.3 ug/L / 785.7-1003.7 ug/L	Biochemical (Hormone(s)-17-beta Estradiol, Response Site: Plasma)	LOEC (785.7-1003.7 ug/L)	Mechanistic: Cell signaling/function; Reproductive/Teratogenic	High	6959356
Continued on next page ...										

...continued from previous page

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
84-69-5	30 Day(s), (30 Day(s))	<i>Danio rerio</i> (Zebra Danio), Adult, Female, Laboratory (FROM THE CHINA ZEBRAFISH RE-SOURCE CENTER, WUHAN, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 4.7-8.6 ug/L / 62.6-97.3 ug/L / 785.7-1003.7 ug/L	Reproduction (Reproduction-Early vitellogenic oocyte, Response Site: Not reported)	LOEC (785.7-1003.7 ug/L)	Reproductive/Teratogenic	High	6959356
84-69-5	30 Day(s), (30 Day(s))	<i>Danio rerio</i> (Zebra Danio), Adult, Female, Laboratory (FROM THE CHINA ZEBRAFISH RE-SOURCE CENTER, WUHAN, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 4.7-8.6 ug/L / 62.6-97.3 ug/L / 785.7-1003.7 ug/L	Biochemical (Hormone(s)-Testosterone to estradiol ratio, Response Site: Plasma)	LOEC (785.7-1003.7 ug/L)	Mechanistic: Cell signaling/function; Reproductive/Teratogenic	High	6959356
84-69-5	30 Day(s), (30 Day(s))	<i>Danio rerio</i> (Zebra Danio), Adult, Female, Laboratory (FROM THE CHINA ZEBRAFISH RE-SOURCE CENTER, WUHAN, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 4.7-8.6 ug/L / 62.6-97.3 ug/L / 785.7-1003.7 ug/L	Biochemical (Hormone(s)-Testosterone, Response Site: Plasma)	NOEC (785.7-1003.7 ug/L)	Mechanistic: Cell signaling/function; Reproductive/Teratogenic	High	6959356
84-69-5	30 Day(s), (30 Day(s))	<i>Danio rerio</i> (Zebra Danio), Adult, Female, Laboratory (FROM THE CHINA ZEBRAFISH RE-SOURCE CENTER, WUHAN, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 4.7-8.6 ug/L / 62.6-97.3 ug/L / 785.7-1003.7 ug/L	Reproduction (Reproduction-Cortical alveoli oocyte, Response Site: Not reported)	NOEC (62.6-97.3 ug/L)	Reproductive/Teratogenic	High	6959356
Continued on next page ...										

...continued from previous page

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
84-69-5	30 Day(s), (30 Day(s))	<i>Danio rerio</i> (Zebra Danio), Adult, Female, Laboratory (FROM THE CHINA ZEBRAFISH RESOURCE CENTER, WUHAN, CHINA)	Fresh water, Aqueous (aquatic habitat), Renewal, Not Reported	Measured	0 ug/L / 0 ug/L / 4.7-8.6 ug/L / 62.6-97.3 ug/L / 785.7-1003.7 ug/L	Reproduction (Reproduction-Early vitellogenic oocyte, Response Site: Not reported)	NOEC (62.6-97.3 ug/L)	Reproductive/Teratogenic	High	6959356
84-69-5	42 Hour(s), (42 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (MAINTAINED AT THE SINNHUBER AQUATIC RES. LAB. (CORVALLIS, OR))	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 9.788435 uM	Cellular (Genetics-Gene expression, Response Site: Not reported)	LOEC (9.788435 uM)	Mechanistic: Cell signaling/function	Medium	5083619
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (MAINTAINED AT THE SINNHUBER AQUATIC RES. LAB. (CORVALLIS, OR))	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 2.5 uM / 5 uM / 10 uM / 12.5 uM / 15 uM	Growth (Development-Deformation, Response Site: Not reported)	EC50 (7.256982 uM)	Development/Growth	Medium	5083619
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (MAINTAINED AT THE SINNHUBER AQUATIC RES. LAB. (CORVALLIS, OR))	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 2.5 uM / 5 uM / 10 uM / 12.5 uM / 15 uM	Growth (Development-Deformation, Response Site: Not reported)	EC60 (7.997385 uM)	Development/Growth	Medium	5083619

Continued on next page ...



...continued from previous page

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
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (MAIN-TAINED AT THE SINNHUBER AQUATIC RES. LAB. (CORVALLIS, OR))	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 2.5 uM / 5 uM / 10 uM / 12.5 uM / 15 uM	Growth (Development-Deformation, Response Site: Not reported)	EC70 (8.804197 uM)	Development/Growth	Medium	5083619
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (MAIN-TAINED AT THE SINNHUBER AQUATIC RES. LAB. (CORVALLIS, OR))	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 2.5 uM / 5 uM / 10 uM / 12.5 uM / 15 uM	Growth (Development-Deformation, Response Site: Not reported)	EC80 (9.788435 uM)	Development/Growth	Medium	5083619
84-69-5	18 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 0.64 uM / 6.4 uM / 64 uM	Mortality (Mortality-Mortality, Response Site: Not reported)	BMD10 (10000 uM)	Mortality	Uninformative	8635978

Continued on next page ...

...continued from previous page

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
84-69-5	18 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Notochord)	BMD10 (10000 uM)	Development/Growth	Uninformative	8635978
84-69-5	18 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Physiology (Intoxication-Immobile, Response Site: Not reported)	BMD10 (10000 uM)	Immobilization	Uninformative	8635978
84-69-5	18 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Development-Slowed, Retarded, Delayed or Non-development, Response Site: Not reported)	BMD10 (300.692862279423 uM)	Development/Growth	Uninformative	8635978

Continued on next page ...

...continued from previous page

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
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Brain)	BMD10 (18.8916650881761 uM)	Development/Growth	Uninformative	8635978
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Somite)	BMD10 (18.8916655285058 uM)	Development/Growth	Uninformative	8635978
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Fin)	BMD10 (18.8916652745495 uM)	Development/Growth	Uninformative	8635978

Continued on next page ...

...continued from previous page

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
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Eye)	BMD10 (21.6632043168555 uM)	Development/Growth	Uninformative	8635978
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Heart)	BMD10 (21.6632044189844 uM)	Development/Growth	Uninformative	8635978
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Otic vesicle)	BMD10 (16.6303231860535 uM)	Development/Growth	Uninformative	8635978

Continued on next page ...

...continued from previous page

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
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Mouth)	BMD10 (21.6632026082697 uM)	Development/Growth	Uninformative	8635978
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Behavior (Behavior-Phototactic response, Response Site: Not reported)	BMD10 (100000 uM)	Behavioral	Uninformative	8635978
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Behavior (Behavior-Phototactic response, Response Site: Not reported)	BMD10 (10000 uM)	Behavioral	Uninformative	8635978

Continued on next page ...

...continued from previous page

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
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Behavior (Behavior-Escape response, Response Site: Not reported)	BMD10 (23.8864364135898 uM)	Behavioral	Uninformative	8635978
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Notochord)	BMD10 (10000 uM)	Development/Growth	Uninformative	8635978
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Jaw)	BMD10 (21.6632013668421 uM)	Development/Growth	Uninformative	8635978

Continued on next page ...

...continued from previous page

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
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Trunk)	BMD10 (10000 uM)	Development/Growth	Uninformative	8635978
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Swim bladder)	BMD10 (10000 uM)	Development/Growth	Uninformative	8635978
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Mortality (Mortality-Mortality, Response Site: Not reported)	BMD10 (16.2722949050164 uM)	Mortality	Uninformative	8635978

Continued on next page ...

...continued from previous page

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
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 0.64 uM / 6.4 uM / 64 uM	Physiology (Physiology-Blood flow, Response Site: Not reported)	BMD10 (10000 uM)	Development/Growth	Uninformative	8635978
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 0.64 uM / 6.4 uM / 64 uM	Physiology (Injury-Curvature, Response Site: Not reported)	BMD10 (18.8916644418415 uM)	Development/Growth	Uninformative	8635978
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 0.64 uM / 6.4 uM / 64 uM	Cellular (Histology-Edema, Response Site: Yolk sac)	BMD10 (21.6632026423545 uM)	Development/Growth	Uninformative	8635978

Continued on next page ...



...continued from previous page

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
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Fin)	BMD10 (10000 uM)	Development/Growth	Uninformative	8635978
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (LAB STOCK FROM OREGON STATE UNIVERSITY SINNHUBER AQUATIC RESEARCH LABORATORY, CORVALLIS, OREGON)	Culture, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Development-Color, Response Site: Not reported)	BMD10 (18.891670963747 uM)	Development/Growth	Uninformative	8635978
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHUBER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Ear)	NOEC (6.4 uM)	Development/Growth	Uninformative	8591199

Continued on next page ...

...continued from previous page

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
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHUBER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 0.64 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Fin)	NOEC (64 uM)	Development/Growth	Uninformative	8591199
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHUBER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 0.64 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Fin)	NOEC (6.4 uM)	Development/Growth	Uninformative	8591199
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHUBER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 0.64 uM / 6.4 uM / 64 uM	Growth (Growth-Stunting, Response Site: Whole organism)	NOEC (64 uM)	Development/Growth	Uninformative	8591199
Continued on next page ...										

...continued from previous page

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
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHU-BER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Swim bladder)	NOEC (64 uM)	Development/Growth	Uninformative	8591199
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHU-BER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Notochord,Tail)	NOEC (64 uM)	Development/Growth	Uninformative	8591199
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHU-BER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Behavior (Behavior-Escape response, Response Site: Not reported)	NOEC (64 uM)	Behavioral	Uninformative	8591199
Continued on next page ...										

...continued from previous page

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
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHU-BER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Nose)	LOEC (64 uM)	Development/Growth	Uninformative	8591199
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHU-BER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Jaw)	LOEC (64 uM)	Development/Growth	Uninformative	8591199
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHU-BER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEC (64 uM)	Mortality	Uninformative	8591199
Continued on next page ...										

...continued from previous page

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
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHU-BER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Somite)	LOEC (64 uM)	Development/Growth	Uninformative	8591199
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHU-BER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Whole organism)	LOEC (64 uM)	Development/Growth	Uninformative	8591199
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHU-BER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Eye)	LOEC (64 uM)	Development/Growth	Uninformative	8591199
Continued on next page ...										

...continued from previous page

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
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHUBER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Brain)	LOEC (64 uM)	Development/Growth	Uninformative	8591199
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHUBER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Fin)	LOEC (64 uM)	Development/Growth	Uninformative	8591199
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHUBER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (6.4 uM)	Mortality	Uninformative	8591199
Continued on next page ...										

...continued from previous page

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
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHUBER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Somite)	NOEC (6.4 uM)	Development/Growth	Uninformative	8591199
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHUBER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Jaw)	NOEC (6.4 uM)	Development/Growth	Uninformative	8591199
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHUBER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Nose)	NOEC (6.4 uM)	Development/Growth	Uninformative	8591199
Continued on next page ...										

...continued from previous page

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
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHU-BER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Eye)	NOEC (6.4 uM)	Development/Growth	Uninformative	8591199
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHU-BER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Growth (Morphology-Abnormal, Response Site: Whole organism)	NOEC (6.4 uM)	Development/Growth	Uninformative	8591199
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHU-BER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Physiology (Physiology-Pigmentation, Response Site: Not reported)	LOEC (64 uM)	Development/Growth	Uninformative	8591199
Continued on next page ...										



...continued from previous page

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
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHUBER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Cellular (Histology-Edema, Response Site: Pericardium)	LOEC (64 uM)	Development/Growth	Uninformative	8591199
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHUBER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Cellular (Histology-Edema, Response Site: Yolk sac)	LOEC (64 uM)	Development/Growth	Uninformative	8591199
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHUBER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Physiology (Physiology-Blood flow, Response Site: Not reported)	NOEC (64 uM)	Development/Growth	Uninformative	8591199
Continued on next page ...										

...continued from previous page

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
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHUBER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Physiology (Physiology-Pigmentation, Response Site: Not reported)	NOEC (6.4 uM)	Development/Growth	Uninformative	8591199
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHUBER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Cellular (Histology-Edema, Response Site: Pericardium)	NOEC (6.4 uM)	Development/Growth	Uninformative	8591199
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHUBER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 6.4 uM / 64 uM	Cellular (Histology-Edema, Response Site: Yolk sac)	NOEC (6.4 uM)	Development/Growth	Uninformative	8591199
Continued on next page ...										

...continued from previous page

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
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHUBER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 0.64 uM / 6.4 uM	Growth (Morphology-Abnormal, Response Site: Ear)	LOEC (64 uM)	Development/Growth	Uninformative	8591199
84-69-5	114 Hour(s), (114 Hour(s))	<i>Danio rerio</i> (Zebra Danio), Embryo, 6 Hours post fertilization, Not Reported, Laboratory (SINNHUBER AQUATIC RESEARCH LABORATORY, OREGON STATE UNIVERSITY, CORVALLIS, OR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Unmeasured	0 uM / 0.0064 uM / 0.064 uM / 0.64 uM / 6.4 uM	Growth (Morphology-Abnormal, Response Site: Brain)	NOEC (6.4 uM)	Development/Growth	Uninformative	8591199
84-69-5	24 Hour(s), (24 Hour(s))	<i>Pimephales promelas</i> (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 / 0.013-0.014 mg/L / 0.027-0.028 mg/L / 0.070-0.080 mg/L / 0.14-0.15 mg/L / 0.31-0.35 mg/L / 0.73-0.82 mg/L / 1.7-1.8 mg/L / 3.6-3.7 mg/L / 6.4-6.9 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (3.6-3.7 mg/L)	Mortality	High	11581733

Continued on next page ...

...continued from previous page

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
84-69-5	24 Hour(s), (24 Hour(s))	<i>Pimephales promelas</i> (Fat-head 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 / 0.014 mg/L / 0.027-0.028 mg/L / 0.070-0.080 mg/L / 0.14-0.15 mg/L / 0.31-0.35 mg/L / 0.73-0.82 mg/L / 1.7-1.8 mg/L / 3.6-3.7 mg/L / 6.4-6.9 mg/L	Biochemical (Biochemistry-Metabolome, Response Site: Not reported)	BMD10 (0.15 mg/L)	Mechanistic: Cell signaling/function	High	11581733
84-69-5	24 Hour(s), (24 Hour(s))	<i>Pimephales promelas</i> (Fat-head 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 / 0.014 mg/L / 0.027-0.028 mg/L / 0.070-0.080 mg/L / 0.14-0.15 mg/L / 0.31-0.35 mg/L / 0.73-0.82 mg/L / 1.7-1.8 mg/L / 3.6-3.7 mg/L / 6.4-6.9 mg/L	Cellular (Genetics-Gene expression, Response Site: Not reported)	BMDL (0.87 mg/L)	Mechanistic: Cell signaling/function	High	11581733

Continued on next page ...

...continued from previous page

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
84-69-5	24 Hour(s), (24 Hour(s))	<i>Pimephales promelas</i> (Fat-head 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 / 0.013-0.014 mg/L / 0.027-0.028 mg/L / 0.070-0.080 mg/L / 0.14-0.15 mg/L / 0.31-0.35 mg/L / 0.73-0.82 mg/L / 1.7-1.8 mg/L / 3.6-3.7 mg/L / 6.4-6.9 mg/L	Behavior (Behavior-Startle, Response Site: Not reported)	EC50 (0.90 mg/L)	Behavioral	High	11581733
84-69-5	24 Hour(s), (24 Hour(s))	<i>Pimephales promelas</i> (Fat-head 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 / 0.013-0.014 mg/L / 0.027-0.028 mg/L / 0.070-0.080 mg/L / 0.14-0.15 mg/L / 0.31-0.35 mg/L / 0.73-0.82 mg/L / 1.7-1.8 mg/L / 3.6-3.7 mg/L / 6.4-6.9 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	LOEC (6.4-6.9 mg/L)	Mortality	High	11581733
Continued on next page ...										

...continued from previous page

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
84-69-5	24 Hour(s), (24 Hour(s))	<i>Pimephales promelas</i> (Fat-head 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 / 0.013-0.014 mg/L / 0.027-0.028 mg/L / 0.070-0.080 mg/L / 0.14-0.15 mg/L / 0.31-0.35 mg/L / 0.73-0.82 mg/L / 1.7-1.8 mg/L / 3.6-3.7 mg/L / 6.4-6.9 mg/L	Mortality (Mortality-Mortality, Response Site: Not reported)	NR-ZERO (3.6-3.7 mg/L)	Mortality	High	11581733

\* 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
84-69-5	3 Day(s), (7 Day(s))	<i>Nicotiana tabacum</i> (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 (Morphology-Density, Length, Response Site: Radicle)	NR (0.01-10.0 mmol/L)	Development/Growth	High	5627041
84-69-5	3 Day(s), (7 Day(s))	<i>Nicotiana tabacum</i> (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
84-69-5	7 Day(s), (7 Day(s))	<i>Nicotiana tabacum</i> (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
84-69-5	7 Day(s), (7 Day(s))	<i>Nicotiana tabacum</i> (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
84-69-5	7 Day(s), (7 Day(s))	<i>Nicotiana tabacum</i> (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
84-69-5	7 Day(s), (7 Day(s))	<i>Nicotiana tabacum</i> (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

Continued on next page ...

...continued from previous page

**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
84-69-5	7 Day(s), (7 Day(s))	<i>Nicotiana tabacum</i> (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
84-69-5	7 Day(s), (7 Day(s))	<i>Nicotiana tabacum</i> (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 (10 mM)	Reproductive/Teratogenic	Low	792357
84-69-5	7 Day(s), (7 Day(s))	<i>Nicotiana tabacum</i> (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
84-69-5	7 Day(s), (7 Day(s))	<i>Nicotiana tabacum</i> (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 (1.0 mM)	Reproductive/Teratogenic	Low	792357

\* 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
84-69-5	24 Hour(s), (24 Hour(s))	<i>Caenorhabditis elegans</i> (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHAB-DITIS GENETICS CENTER, UNIVERSITY OF MINNESOTA, MN, USA)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 ppm / 100 ppm / 1000 ppm	Behavior (Behavior-Distance moved, change in direct movement, Response Site: Not reported)	LOEL (100 ppm)	Behavioral	High	2215375
84-69-5	24 Hour(s), (24 Hour(s))	<i>Caenorhabditis elegans</i> (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHAB-DITIS GENETICS CENTER, UNIVERSITY OF MINNESOTA, MN, USA)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 ppm / 100 ppm / 1000 ppm	Behavior (Behavior-Movements, number of, Response Site: Not reported)	LOEL (100 ppm)	Behavioral	High	2215375
84-69-5	24 Hour(s), (24 Hour(s))	<i>Caenorhabditis elegans</i> (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHAB-DITIS GENETICS CENTER, UNIVERSITY OF MINNESOTA, MN, USA)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 ppm / 100 ppm / 1000 ppm	Behavior (Behavior-Reversals, Response Site: Not reported)	LOEL (100 ppm)	Behavioral	High	2215375

Continued on next page ...

...continued from previous page

**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
84-69-5	24 Hour(s), (24 Hour(s))	<i>Caenorhabditis elegans</i> (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHAB-DITIS GENETICS CENTER, UNIVERSITY OF MINNESOTA, MN, USA)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 ppm / 100 ppm / 1000 ppm	Biochemical (Biochemistry-Reactive oxygen species, Response Site: Not reported)	LOEL (100 ppm)	Mechanistic: Oxidative stress (including redox biology)	High	2215375
84-69-5	24 Hour(s), (24 Hour(s))	<i>Caenorhabditis elegans</i> (Nematode), Larva, 4 Stage, Not Reported, Laboratory (CAENORHAB-DITIS GENETICS CENTER, UNIVERSITY OF MINNESOTA, MN, USA)	Culture, Environmental, Culture medium, Not Reported	Unmeasured	0 ppm / 100 ppm / 1000 ppm	Cellular (Cell(s)-Size, Response Site: Neuron)	LOEL (100 ppm)	Mechanistic	High	2215375

\* 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
84-69-5	0 Day(s), (5 Day(s))	<i>Lasius niger</i> (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
84-69-5	1 Day(s), (5 Day(s))	<i>Lasius niger</i> (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
84-69-5	2 Day(s), (5 Day(s))	<i>Lasius niger</i> (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

Continued on next page ...

...continued from previous page

**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
84-69-5	3-5 Day(s), (5 Day(s))	<i>Lasius niger</i> (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

\* 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: 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))	<i>Cyprinodon variegatus</i> (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	96 Hour(s), (96 Hour(s))	<i>Cyprinodon variegatus</i> (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	72 Hour(s), (72 Hour(s))	<i>Danio rerio</i> (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	72 Hour(s), (72 Hour(s))	<i>Danio rerio</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Lepomis macrochirus</i> (Bluegill), Juvenile, Not Reported, Not reported (NR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	LC50 (0.48 mg/L)	Mortality	High	1321996
84-74-2	96 Hour(s), (96 Hour(s))	<i>Lepomis macrochirus</i> (Bluegill), Juvenile, Not Reported, Not reported (NR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	NR / NR	Mortality (Mortality-Mortality, Response Site: Not reported)	NOEC (0.42 mg/L)	Mortality	High	1321996
84-74-2	24 Hour(s), (96 Hour(s))	<i>Lepomis macrochirus</i> (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))	<i>Lepomis macrochirus</i> (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

Continued on next page ...

...continued from previous page

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	72 Hour(s), (96 Hour(s))	<i>Lepomis macrochirus</i> (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))	<i>Lepomis macrochirus</i> (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))	<i>Lepomis macrochirus</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Lepomis macrochirus</i> (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))	<i>Lepomis macrochirus</i> (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
84-74-2	96 Hour(s), (96 Hour(s))	<i>Oncorhynchus mykiss</i> (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))	<i>Oncorhynchus mykiss</i> (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
Continued on next page ...										



...continued from previous page

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))	<i>Oncorhynchus mykiss</i> (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	24 Hour(s), (96 Hour(s))	<i>Oncorhynchus mykiss</i> (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	48 Hour(s), (96 Hour(s))	<i>Oncorhynchus mykiss</i> (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
Continued on next page ...										

...continued from previous page

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))	<i>Oncorhynchus mykiss</i> (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))	<i>Oncorhynchus mykiss</i> (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	96 Hour(s), (96 Hour(s))	<i>Oncorhynchus mykiss</i> (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
Continued on next page ...										

...continued from previous page

**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	2 Day(s), (99 Day(s))	<i>Oncorhynchus mykiss</i> (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	2 Day(s), (99 Day(s))	<i>Oncorhynchus mykiss</i> (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
84-74-2	2 Day(s), (99 Day(s))	<i>Oncorhynchus mykiss</i> (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

Continued on next page ...

...continued from previous page

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), (13 Day(s))	<i>Oncorhynchus mykiss</i> (Rain-bow 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	96 Hour(s), (13 Day(s))	<i>Oncorhynchus mykiss</i> (Rain-bow 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))	<i>Oncorhynchus mykiss</i> (Rain-bow 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
84-74-2	13 Day(s), (13 Day(s))	<i>Oncorhynchus mykiss</i> (Rain-bow 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

Continued on next page ...

...continued from previous page

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	13 Day(s), (13 Day(s))	<i>Oncorhynchus mykiss</i> (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))	<i>Oncorhynchus mykiss</i> (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	40 Day(s), (99 Day(s))	<i>Oncorhynchus mykiss</i> (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
Continued on next page ...										

...continued from previous page

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	40 Day(s), (99 Day(s))	<i>Oncorhynchus mykiss</i> (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))	<i>Oncorhynchus mykiss</i> (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	62 Day(s), (99 Day(s))	<i>Oncorhynchus mykiss</i> (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
Continued on next page ...										

...continued from previous page

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))	<i>Oncorhynchus mykiss</i> (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	62 Day(s), (99 Day(s))	<i>Oncorhynchus mykiss</i> (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	99 Day(s), (99 Day(s))	<i>Oncorhynchus mykiss</i> (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
Continued on next page ...										

...continued from previous page

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))	<i>Oncorhynchus mykiss</i> (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))	<i>Oncorhynchus mykiss</i> (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
84-74-2	99 Day(s), (99 Day(s))	<i>Oncorhynchus mykiss</i> (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
Continued on next page ...										



...continued from previous page

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))	<i>Oncorhynchus mykiss</i> (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	99 Day(s), (99 Day(s))	<i>Oncorhynchus mykiss</i> (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))	<i>Oncorhynchus mykiss</i> (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
Continued on next page ...										

...continued from previous page

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))	<i>Oncorhynchus mykiss</i> (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))	<i>Oncorhynchus mykiss</i> (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	56 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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	28-63 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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
84-74-2	98 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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	98 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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	56 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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
84-74-2	112 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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	98 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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
84-74-2	70 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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
84-74-2	98 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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	56 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...



...continued from previous page

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	28-63 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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	98 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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
84-74-2	28-63 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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
84-74-2	70 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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	56 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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	63-112 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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	112 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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	98 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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	112 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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	56 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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	98 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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
84-74-2	70 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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	98 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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	112 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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	28-63 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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	112 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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	70 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...



...continued from previous page

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))	<i>Oryzias latipes</i> (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	28-63 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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	70 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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
84-74-2	98 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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	28-63 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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
84-74-2	70 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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	70 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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	28 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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	70 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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	70 Days post fertilization, (218 Day(s))	<i>Oryzias latipes</i> (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
84-74-2	21 Day(s), (21 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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
84-74-2	21 Day(s), (21 Day(s))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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
Continued on next page ...										

...continued from previous page

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))	<i>Oryzias latipes</i> (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	28 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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
Continued on next page ...										



...continued from previous page

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))	<i>Oryzias latipes</i> (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
84-74-2	28 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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
Continued on next page ...										

...continued from previous page

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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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
Continued on next page ...										

...continued from previous page

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))	<i>Oryzias latipes</i> (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	70 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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
84-74-2	99-119 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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
84-74-2	134 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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
84-74-2	134 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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
84-74-2	134 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...



...continued from previous page

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))	<i>Oryzias latipes</i> (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
84-74-2	134 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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
84-74-2	134 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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
84-74-2	134 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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
84-74-2	134 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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
84-74-2	134 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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
84-74-2	197-217 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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

Continued on next page ...



...continued from previous page

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))	<i>Oryzias latipes</i> (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	218 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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
84-74-2	218 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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
84-74-2	218 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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	218 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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
84-74-2	120-218 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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	120-218 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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
84-74-2	218 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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-Mineralization, Response Site: Kidney)	LOEC (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))	<i>Oryzias latipes</i> (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
84-74-2	218 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...



...continued from previous page

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))	<i>Oryzias latipes</i> (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	120-218 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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))	<i>Oryzias latipes</i> (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-Mineralization, Response Site: Kidney)	LOEC (305 (12.0-727) ug/L)	Mechanistic: Biomarkers (exposure and effect); Cell signaling/function; Endocrine toxicity; Reproductive/Teratogenic	High	10064186

Continued on next page ...

...continued from previous page

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))	<i>Oryzias latipes</i> (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-Mineralization, 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))	<i>Oryzias latipes</i> (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-Mineralization, 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
84-74-2	218 Day(s), (218 Day(s))	<i>Oryzias latipes</i> (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

Continued on next page ...

...continued from previous page

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), (24 Hour(s))	<i>Oryzias melastigma</i> (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	24 Hour(s), (24 Hour(s))	<i>Oryzias melastigma</i> (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))	<i>Pimephales promelas</i> (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	96 Hour(s), (96 Hour(s))	<i>Pimephales promelas</i> (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))	<i>Pimephales promelas</i> (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
84-74-2	96 Hour(s), (96 Hour(s))	<i>Pimephales promelas</i> (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

Continued on next page ...

...continued from previous page

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), (20 Day(s))	<i>Pimephales promelas</i> (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
84-74-2	48 Hour(s), (20 Day(s))	<i>Pimephales promelas</i> (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))	<i>Pimephales promelas</i> (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))	<i>Pimephales promelas</i> (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))	<i>Pimephales promelas</i> (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

Continued on next page ...

...continued from previous page

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	20 Day(s), (20 Day(s))	<i>Pimephales promelas</i> (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	20 Day(s), (20 Day(s))	<i>Pimephales promelas</i> (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
84-74-2	20 Day(s), (20 Day(s))	<i>Pimephales promelas</i> (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

\* 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))	<i>Americamysis bahia</i> (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))	<i>Americamysis bahia</i> (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	14 Day(s), (14 Day(s))	<i>Arthropoda</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Arthropoda</i> (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))	<i>Arthropoda</i> (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))	<i>Arthropoda</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Chironomus plumosus</i> (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))	<i>Chironomus plumosus</i> (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))	<i>Chironomus plumosus</i> (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))	<i>Chironomus plumosus</i> (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

Continued on next page ...



...continued from previous page

**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))	<i>Chironomus plumosus</i> (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	20 Day(s), (40 Day(s))	<i>Chironomus plumosus</i> (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))	<i>Chironomus plumosus</i> (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))	<i>Chironomus plumosus</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Chironomus plumosus</i> (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))	<i>Chironomus plumosus</i> (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))	<i>Chironomus plumosus</i> (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))	<i>Chironomus plumosus</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Chironomus plumosus</i> (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))	<i>Chironomus plumosus</i> (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))	<i>Chironomus tentans</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Chironomus tentans</i> (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))	<i>Chironomus tentans</i> (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
84-74-2	10 Day(s), (10 Day(s))	<i>Chironomus tentans</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Chironomus tentans</i> (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))	<i>Chironomus tentans</i> (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))	<i>Chironomus tentans</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Chironomus tentans</i> (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))	<i>Chironomus tentans</i> (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))	<i>Chironomus tentans</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Chironomus tentans</i> (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aquatic (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))	<i>Chironomus tentans</i> (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aquatic (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

Continued on next page ...

...continued from previous page

**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))	<i>Chironomus tentans</i> (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aquatic (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))	<i>Chironomus tentans</i> (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aquatic (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))	<i>Chironomus tentans</i> (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aquatic (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

Continued on next page ...



...continued from previous page

**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))	<i>Chironomus tentans</i> (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aquatic (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))	<i>Chironomus tentans</i> (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aquatic (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

Continued on next page ...

...continued from previous page

**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))	<i>Chironomus tentans</i> (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aquatic (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))	<i>Chironomus tentans</i> (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aquatic (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))	<i>Chironomus tentans</i> (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aquatic (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))	<i>Chironomus tentans</i> (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aquatic (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

Continued on next page ...

...continued from previous page

**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))	<i>Chironomus tentans</i> (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))	<i>Chironomus tentans</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Chironomus tentans</i> (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aquatic (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
84-74-2	10 Day(s), (10 Day(s))	<i>Chironomus tentans</i> (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aquatic (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

Continued on next page ...

...continued from previous page

**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))	<i>Chironomus tentans</i> (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))	<i>Chironomus tentans</i> (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))	<i>Chironomus tentans</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Chironomus tentans</i> (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))	<i>Chironomus tentans</i> (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))	<i>Chironomus tentans</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Chironomus tentans</i> (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
84-74-2	10 Day(s), (10 Day(s))	<i>Chironomus tentans</i> (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))	<i>Chironomus tentans</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Chironomus tentans</i> (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))	<i>Chironomus tentans</i> (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))	<i>Chironomus tentans</i> (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
84-74-2	10 Day(s), (10 Day(s))	<i>Chironomus tentans</i> (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

Continued on next page ...



...continued from previous page

**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))	<i>Chironomus tentans</i> (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aquatic (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))	<i>Chironomus tentans</i> (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aquatic (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

Continued on next page ...

...continued from previous page

**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))	<i>Chironomus tentans</i> (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aquatic (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
84-74-2	10 Day(s), (10 Day(s))	<i>Chironomus tentans</i> (Midge), 2-3 Instar, Not Reported, Laboratory (NR)	Fresh water, Aquatic (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-Response Site: Not reported)	LC50 (4730 mg/kg dw sediment)	Mortality	High	679311

Continued on next page ...

...continued from previous page

**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))	<i>Chironomus tentans</i> (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))	<i>Chironomus tentans</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Chironomus tentans</i> (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))	<i>Chironomus tentans</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Chironomus tentans</i> (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))	<i>Chironomus tentans</i> (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))	<i>Chironomus tentans</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Chironomus tentans</i> (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))	<i>Chironomus tentans</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Chironomus tentans</i> (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	14 Day(s), (14 Day(s))	<i>Corophium acherusicum</i> (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

Continued on next page ...

...continued from previous page

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))	<i>Corophium acherusicum</i> (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	48 Hour(s), (48 Hour(s))	<i>Daphnia magna</i> (Water Flea), <=24 Hour(s), Not Reported, Not reported (NR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	NR / NR	Physiology (Intoxication-Immobilized, Response Site: Not reported)	EC50 (2.99 mg/L)	Immobilization	High	1321996
84-74-2	48 Hour(s), (48 Hour(s))	<i>Daphnia magna</i> (Water Flea), <=24 Hour(s), Not Reported, Not reported (NR)	Fresh water, Aqueous (aquatic habitat), Static, Not Reported	Measured	NR / NR	Physiology (Intoxication-Immobilized, Response Site: Not reported)	NOEC (1.70 mg/L)	Immobilization	High	1321996
84-74-2	48 Hour(s), (48 Hour(s))	<i>Daphnia magna</i> (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
Continued on next page ...										



...continued from previous page

**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))	<i>Daphnia magna</i> (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
84-74-2	8.0 Day(s), (16 Day(s))	<i>Daphnia magna</i> (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))	<i>Daphnia magna</i> (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))	<i>Daphnia magna</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Daphnia magna</i> (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))	<i>Daphnia magna</i> (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))	<i>Daphnia magna</i> (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
84-74-2	16 Day(s), (16 Day(s))	<i>Daphnia magna</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Daphnia magna</i> (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	16 Day(s), (16 Day(s))	<i>Daphnia magna</i> (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))	<i>Daphnia magna</i> (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	24 Hour(s), (48 Hour(s))	<i>Daphnia magna</i> (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))	<i>Daphnia magna</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Daphnia magna</i> (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
84-74-2	21 Day(s), (21 Day(s))	<i>Daphnia magna</i> (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))	<i>Daphnia magna</i> (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))	<i>Daphnia magna</i> (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 growth rate, Response Site: Not reported)	LOEC (0.48 mg/L)	Reproductive/Teratogenic	High	4829279
84-74-2	21 Day(s), (21 Day(s))	<i>Daphnia magna</i> (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))	<i>Daphnia magna</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Daphnia magna</i> (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	21 Day(s), (21 Day(s))	<i>Daphnia magna</i> (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	10 Day(s), (10 Day(s))	<i>Hyaella azteca</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Hyaella azteca</i> (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
84-74-2	10 Day(s), (10 Day(s))	<i>Hyaella azteca</i> (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))	<i>Hyaella azteca</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Hyaella azteca</i> (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))	<i>Hyaella azteca</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Hyaella azteca</i> (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
84-74-2	10 Day(s), (10 Day(s))	<i>Hyaella azteca</i> (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))	<i>Hyaella azteca</i> (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

Continued on next page ...



...continued from previous page

**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))	<i>Hyaella azteca</i> (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))	<i>Hyaella azteca</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Hyaella azteca</i> (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))	<i>Hyaella azteca</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Hyaella azteca</i> (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))	<i>Hyaella azteca</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Hyaella azteca</i> (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))	<i>Hyaella azteca</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Hyaella azteca</i> (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))	<i>Hyaella azteca</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Hyaella azteca</i> (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))	<i>Hyaella azteca</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Hyaella azteca</i> (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))	<i>Hyaella azteca</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Hyaella azteca</i> (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
84-74-2	10 Day(s), (10 Day(s))	<i>Hyaella azteca</i> (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))	<i>Hyaella azteca</i> (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

Continued on next page ...



...continued from previous page

**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))	<i>Hyaella azteca</i> (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))	<i>Hyaella azteca</i> (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
84-74-2	10 Day(s), (10 Day(s))	<i>Hyaella azteca</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Hyaella azteca</i> (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))	<i>Hyaella azteca</i> (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))	<i>Hyaella azteca</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Hyaella azteca</i> (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))	<i>Hyaella azteca</i> (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))	<i>Hyaella azteca</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Hyaella azteca</i> (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))	<i>Hyaella azteca</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Hyalomma azteca</i> (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	96 Hour(s), (96 Hour(s))	<i>Nitocra spinipes</i> (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 / 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))	<i>Paratanytarsus parthenogeneticus</i> (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	96 Hour(s), (96 Hour(s))	<i>Paratanytarsus parthenogeneticus</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Paratanytarsus parthenogeneticus</i> (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))	<i>Paratanytarsus parthenogeneticus</i> (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

\* 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	24 Hour(s), (96 Hour(s))	<i>Scenedesmus sp.</i> (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (SPANISH BANK OF ALGAE, UNIVERSITY OF LAS PALMAS DE GRAN CANARIA)	Culture, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Chemical analysis reported	0 ug/L / 0 ug/L / 0.02 ug/L / 1 ug/L / 100 ug/L / 500 ug/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (100 ug/L)	Development/Growth	High	6967432
84-74-2	24 Hour(s), (96 Hour(s))	<i>Scenedesmus sp.</i> (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (SPANISH BANK OF ALGAE, UNIVERSITY OF LAS PALMAS DE GRAN CANARIA)	Culture, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Chemical analysis reported	0 ug/L / 0 ug/L / 0.02 ug/L / 1 ug/L / 100 ug/L / 500 ug/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (500 ug/L)	Development/Growth	High	6967432
84-74-2	48 Hour(s), (96 Hour(s))	<i>Scenedesmus sp.</i> (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (SPANISH BANK OF ALGAE, UNIVERSITY OF LAS PALMAS DE GRAN CANARIA)	Culture, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Chemical analysis reported	0 ug/L / 0 ug/L / 0.02 ug/L / 1 ug/L / 100 ug/L / 500 ug/L	Population (Population-Abundance, Response Site: Not reported)	EC50 (41.88 ug/L)	Development/Growth	High	6967432

Continued on next page ...

...continued from previous page

**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))	<i>Scenedesmus sp.</i> (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (SPANISH BANK OF ALGAE, UNIVERSITY OF LAS PALMAS DE GRAN CANARIA)	Culture, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Chemical analysis reported	0 ug/L / 0 ug/L / 0.02 ug/L / 1 ug/L / 100 ug/L / 500 ug/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (0.02 ug/L)	Development/Growth	High	6967432
84-74-2	72 Hour(s), (96 Hour(s))	<i>Scenedesmus sp.</i> (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (SPANISH BANK OF ALGAE, UNIVERSITY OF LAS PALMAS DE GRAN CANARIA)	Culture, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Chemical analysis reported	0 ug/L / 0 ug/L / 0.02 ug/L / 1 ug/L / 100 ug/L / 500 ug/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (0.02 ug/L)	Development/Growth	High	6967432
84-74-2	96 Hour(s), (96 Hour(s))	<i>Scenedesmus sp.</i> (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (SPANISH BANK OF ALGAE, UNIVERSITY OF LAS PALMAS DE GRAN CANARIA)	Culture, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Chemical analysis reported	0 ug/L / 0 ug/L / 0.02 ug/L / 1 ug/L / 100 ug/L / 500 ug/L	Biochemical (Biochemistry-Carbohydrate, Response Site: Not reported)	NR (0.02-500 ug/L)	Nutritional and Metabolic	High	6967432

Continued on next page ...



...continued from previous page

**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))	<i>Scenedesmus sp.</i> (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (SPANISH BANK OF ALGAE, UNIVERSITY OF LAS PALMAS DE GRAN CANARIA)	Culture, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Chemical analysis reported	0 ug/L / 0 ug/L / 0.02 ug/L / 1 ug/L / 100 ug/L / 500 ug/L	Population (Population-Abundance, Response Site: Not reported)	NOEC (0.02 ug/L)	Development/Growth	High	6967432
84-74-2	96 Hour(s), (96 Hour(s))	<i>Scenedesmus sp.</i> (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (SPANISH BANK OF ALGAE, UNIVERSITY OF LAS PALMAS DE GRAN CANARIA)	Culture, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Chemical analysis reported	0 ug/L / 0 ug/L / 0.02 ug/L / 1 ug/L / 100 ug/L / 500 ug/L	Biochemical (Biochemistry-Chlorophyll A concentration, Response Site: Not reported)	NR (0.02-500 ug/L)	Mechanistic: Photosynthesis	High	6967432
84-74-2	96 Hour(s), (96 Hour(s))	<i>Scenedesmus sp.</i> (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (SPANISH BANK OF ALGAE, UNIVERSITY OF LAS PALMAS DE GRAN CANARIA)	Culture, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Chemical analysis reported	0 ug/L / 0 ug/L / 0.02 ug/L / 1 ug/L / 100 ug/L / 500 ug/L	Biochemical (Biochemistry-Chlorophyll B concentration, Response Site: Not reported)	NOEC (100 ug/L)	Mechanistic: Photosynthesis	High	6967432

Continued on next page ...

...continued from previous page

**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))	<i>Scenedesmus sp.</i> (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (SPANISH BANK OF ALGAE, UNIVERSITY OF LAS PALMAS DE GRAN CANARIA)	Culture, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Chemical analysis reported	0 ug/L / 0 ug/L / 0.02 ug/L / 1 ug/L / 100 ug/L / 500 ug/L	Biochemical (Biochemistry-Chlorophyll B concentration, Response Site: Not reported)	LOEC (500 ug/L)	Mechanistic: Photosynthesis	High	6967432
84-74-2	96 Hour(s), (96 Hour(s))	<i>Scenedesmus sp.</i> (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (SPANISH BANK OF ALGAE, UNIVERSITY OF LAS PALMAS DE GRAN CANARIA)	Culture, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Chemical analysis reported	0 ug/L / 0 ug/L / 0.02 ug/L / 1 ug/L / 100 ug/L / 500 ug/L	Biochemical (Biochemistry-Carotenoid content, Response Site: Not reported)	NR (0.02-500 ug/L)	Mechanistic: Photosynthesis	High	6967432
84-74-2	96 Hour(s), (96 Hour(s))	<i>Scenedesmus sp.</i> (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (SPANISH BANK OF ALGAE, UNIVERSITY OF LAS PALMAS DE GRAN CANARIA)	Culture, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Chemical analysis reported	0 ug/L / 0 ug/L / 0.02 ug/L / 1 ug/L / 100 ug/L / 500 ug/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (0.02 ug/L)	Development/Growth	High	6967432

Continued on next page ...

...continued from previous page

**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))	<i>Scenedesmus sp.</i> (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (SPANISH BANK OF ALGAE, UNIVERSITY OF LAS PALMAS DE GRAN CANARIA)	Culture, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Chemical analysis reported	0 ug/L / 0 ug/L / 0.02 ug/L / 1 ug/L / 100 ug/L / 500 ug/L	Biochemical (Biochemistry-Protein content, Response Site: Not reported)	LOEC (500 ug/L)	Nutritional and Metabolic	High	6967432
84-74-2	24-96 Hour(s), (96 Hour(s))	<i>Scenedesmus sp.</i> (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (SPANISH BANK OF ALGAE, UNIVERSITY OF LAS PALMAS DE GRAN CANARIA)	Culture, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Chemical analysis reported	0 ug/L / 0 ug/L / 0.02 ug/L / 1 ug/L / 100 ug/L / 500 ug/L	Population (Population-Abundance, Response Site: Not reported)	LOEC (1 ug/L)	Development/Growth	High	6967432
84-74-2	96 Hour(s), (96 Hour(s))	<i>Scenedesmus sp.</i> (Green Algae), Exponential growth phase (log), Not Reported, Laboratory (SPANISH BANK OF ALGAE, UNIVERSITY OF LAS PALMAS DE GRAN CANARIA)	Culture, Aqueous (aquatic habitat), Aquatic - not reported, Not Reported	Chemical analysis reported	0 ug/L / 0 ug/L / 0.02 ug/L / 1 ug/L / 100 ug/L / 500 ug/L	Biochemical (Biochemistry-Protein content, Response Site: Not reported)	NOEC (100 ug/L)	Nutritional and Metabolic	High	6967432

Continued on next page ...

...continued from previous page

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))	<i>Selenastrum capricornutum</i> (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))	<i>Selenastrum capricornutum</i> (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

\* 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	14 Day(s), (14 Day(s))	<i>Mollusca</i> (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))	<i>Mollusca</i> (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
84-74-2	14 Day(s), (14 Day(s))	<i>Mollusca</i> (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))	<i>Mollusca</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Mollusca</i> (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
84-74-2	14 Day(s), (14 Day(s))	<i>Mollusca</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Mollusca</i> (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))	<i>Mollusca</i> (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: 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))	<i>Animalia</i> (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))	<i>Animalia</i> (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))	<i>Animalia</i> (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))	<i>Animalia</i> (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

Continued on next page ...



...continued from previous page

**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))	<i>Animalia</i> (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))	<i>Animalia</i> (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))	<i>Animalia</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Animalia</i> (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))	<i>Animalia</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Animalia</i> (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))	<i>Chordata</i> (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))	<i>Chordata</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Chordata</i> (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))	<i>Chordata</i> (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.

### 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))	<i>Actiniaria</i> (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
84-74-2	14 Day(s), (14 Day(s))	<i>Actiniaria</i> (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))	<i>Actiniaria</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Echinodermata</i> (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
84-74-2	14 Day(s), (14 Day(s))	<i>Echinodermata</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Molgula manhattensis</i> (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
84-74-2	14 Day(s), (14 Day(s))	<i>Molgula manhattensis</i> (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))	<i>Ophiophragmus filograneus</i> (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

Continued on next page ...

...continued from previous page

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

\* 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))	<i>Annelida</i> (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))	<i>Annelida</i> (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))	<i>Annelida</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Annelida</i> (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))	<i>Annelida</i> (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

Continued on next page ...

...continued from previous page

**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))	<i>Annelida</i> (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	14 Day(s), (14 Day(s))	<i>Nemertea</i> (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
84-74-2	14 Day(s), (14 Day(s))	<i>Nemertea</i> (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.

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
84-69-5	15 days, (21 days)	Rat (Rattus norvegicus), Sampling Age: NR Exposure Age: Gestation, F, Sprague-Dawley	Gavage	Unmeasured	0/250/500/750/1000	250	NOAEL	Reproduction	High	680389
84-69-5	15 days, (21 days)	Rat (Rattus norvegicus), Sampling Age: NR Exposure Age: Gestation, F, Sprague-Dawley	Gavage	Unmeasured	0/250/500/750/1000	500	LOAEL	Reproduction	High	680389
84-69-5	10 days, (21 days)	Rat (Rattus norvegicus), Sampling Age: NR Exposure Age: Gestation, F, Sprague-Dawley	Gavage	Unmeasured	0/125/250/500/625	250	NOAEL	Reproduction	High	680390
84-69-5	10 days, (21 days)	Rat (Rattus norvegicus), Sampling Age: NR Exposure Age: Gestation, F, Sprague-Dawley	Gavage	Unmeasured	0/125/250/500/625	500	LOAEL	Reproduction	High	680390

Diisobutyl 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	<b>POD: 300 mg/kg-bw/day (LOAEL)</b> <b>-Decreased ex vivo fetal testicular testosterone production</b> n= 3 Dose= 0, n= 3 Dose= 100, n= 3 Dose= 300, n= 2 Dose= 600, n= 2 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. Each pregnant rat was randomly divided into groups based on weight to ensure equal distribution. Figure 2B showed decreased fetal testosterone production across multiple doses; 0, 100, 300, 600, or 900 mg/kg-day. Statistical analysis indicated a LOAEL of 300 mg/kg-day.	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- Fetal testosterone production ex vivo; Medium	Gray et. al 2021 9419406
The study did not report any compliance methods or if study was consistent with GLP conditions. Rat-Other (Sprague-Dawley-Charles River)-Female	Oral-Gavage-Duration: Reproductive/Developmental-1-F0 - gestation (GD 14-18) Pregnant dams were exposed from GD 14-18	<b>POD: 100 mg/kg-bw/day (Other)</b> <b>-Developmental. Decrease in ex vivo testosterone production from testes of fetal pups</b> n= 3 Dose= 0, n= 3 Dose= 100, n= 3 Dose= 300, n= 3 Dose= 600, n= 3 Dose= 900, mg/kg-bw/dayTotal # of generations: 1 Female Exposure: F0 - gestation, GD 14-18	Pregnant Sprague-Dawley rats were dosed via gavage with 0 (corn oil), 100, 300, 600, or 900 mg/kg-day DIBP on GDs 14-18 (N=3/dose). Dams were sacrificed on GD 18 and fetal testes were collected for determination of ex vivo testicular testosterone production and changes in expression of StAR and Cyp11A mRNA. Treatment with DIBP did not cause maternal mortality, overt toxicity, reduce maternal body weight, or reduce litter size (data not shown in publication). Ex vivo fetal testicular testosterone production was reduced in a dose-dependent manner starting at $\geq 300$ mg/kg-day DIBP. mRNA levels for StAR were reduced at $\geq 300$ mg/kg-day DIBP, while Cyp11a mRNA was reduced at $\geq 100$ mg/kg-day DIBP. This study supports a NOEL of 100 mg/kg-d based on antiandrogenic effects. A NOAEL of 900 mg/kg/day was determined based on lack of mortality, clinical signs, and body weight changes in pregnant dams. A developmental NOAEL of 100 mg/kg/day was determined, based on decreased testosterone produced from the testes ex vivo.	Small number of treated dams (n=3).	Reproductive/Developmental- Male Reproductive - testosterone; High	Hannas et. al 2011 788239

\* Overall Quality Determination

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*
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 MiBP (b=-1.36; 95%CI: [-2.51, -0.21]). The gross motor composite score in girls was also inversely associated with the prenatal concentrations of ln MiBP (b = -0.56; 95% CI: [-1.12, -0.01]).. Among girls, the adjusted BOT-2 total composite score and gross motor composite score was lower with higher prenatal concentrations of ln (MiBP). No statistically significant associations between prenatal ln (MiBP) and any of the outcomes among boys. In contrast to prenatal phthalate results, none of the child MiBP phthalates were associated with BOT-2 scores..	Balalian et. al 2019 5039985 Medium

Continued on next page ...

...continued from previous page

**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 MiBP (b=-1.36; 95%CI: [-2.51, -0.21]). The gross motor composite score in girls was also inversely associated with the prenatal concentrations of ln MiBP (b = -0.56; 95% CI: [-1.12, -0.01]).. Among girls, the adjusted BOT-2 total composite score and gross motor composite score was lower with higher prenatal concentrations of ln (MiBP). No statistically significant associations between prenatal ln (MiBP) and any of the outcomes among boys. In contrast to prenatal phthalate results, none of the child MiBP phthalates were associated with BOT-2 scores..	Balalian et. al 2019 5039985 Medium

Continued on next page ...



... continued from previous page

**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: 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
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

Continued on next page ...

...continued from previous page

**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

Continued on next page ...

...continued from previous page

**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 questionnaires. 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
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

Continued on next page ...

...continued from previous page

**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

Continued on next page ...

...continued from previous page

**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

Continued on next page ...

... continued from previous page

**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

Continued on next page ...

...continued from previous page

**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

Continued on next page ...

...continued from previous page

**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, prepregnancy 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
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

Continued on next page ...



...continued from previous page

**Human Health Hazard Epidemiology Extraction Table:**

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

Continued on next page ...

...continued from previous page

**Human Health Hazard Epidemiology Extraction Table:**

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

Continued on next page ...

...continued from previous page

**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

...continued from previous page

**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

...continued from previous page

**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 border-line 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

...continued from previous page

**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

...continued from previous page

**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

...continued from previous page

**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



...continued from previous page

**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

...continued from previous page

**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

Continued on next page ...

...continued from previous page

**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

Continued on next page ...

...continued from previous page

**Human Health Hazard Epidemiology Extraction Table:**

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Pubertal timing (thelarche, pubarche, menarche, gonadarche)	Health Effect: Reproductive/Developmental- Pubertal timing (thelarche, pubarche, menarche, gonadarche)-Non-cancer. Outcome measure: Clinical Tanner staging	Consumers, Pregnant people. Middle childhood (6-11), Teens (12-17), Adults (18+). United States; Salinas Valley, California. Female, Male. Cohort (Prospective). PESS: Lifestage , Studies focusing on reproductive parameters. Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Pregnant women and their children recruited from community clinics in the Salinas Valley, California (n=179 girls, n=159 boys). Center for the Health Assessment of Mothers and Children of Salinas (CHAMACOS). Recruitment: 1999-2000; Follow-up: ages 9-13.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured twice during pregnancy (mean of 14.0 and 26.9 weeks gestation).	Parametric accelerated failure time. Confounders adjusted for: maternal education, maternal years in the United States, family income, maternal pre-pregnancy BMI.	Lowest exposure concentration for a significant adverse health outcome response: Q3 (2.8-5.4 ng/g creatinine). Mean shift in age at thelarche (months) among girls (95% CI):Q2 vs. Q1: -1.0 (-6.6, 4.9)Q3 vs. Q1: 6.5 (1.0, 12.3)Q4 vs. Q1: -2.6 (-7.8, 2.8). A statistically significant positive association between prenatal MiBP exposure and age at thelarche among girls was found for Q3 vs. Q1, with a mean shift in age of 6.5 (95% CI 1.0-12.3) months. No statistically significant associations were found for Q2 or Q4 vs. Q1. No statistically significant associations were found between MiBP or MBP and other pubertal timing outcomes in girls or for any outcomes among boys, though a statistically significant association was found between MEP and pubarche in girls..	Harley et. al 2019 5043449 Medium

Continued on next page ...

...continued from previous page

**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

Continued on next page ...

...continued from previous page

**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

Continued on next page ...

...continued from previous page

**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
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

Continued on next page ...

...continued from previous page

**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..	Muerkoster et. al 2020 7978907 Medium

Continued on next page ...



...continued from previous page

**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

Continued on next page ...

...continued from previous page

**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

Continued on next page ...

...continued from previous page

**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. Recruitment: 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
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: $\geq 15.66$ 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

Continued on next page ...

...continued from previous page

**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

Continued on next page ...

...continued from previous page

**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

# Human Health Hazard Epidemiology Extraction

Diisobutyl Phthalate

Metabolite: Mono-isobutyl phthalate (MiBP); Mono-hydroxyisobutyl phthalate (MHiBP)

**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: 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
Autism Spectrum Disorder (ASD) and Non-Typical Development (Non-TD)	Health Effect: Neurological/Behavioral-Autism spectrum disorder (ASD), non-typical development (Non-TD)-Non-cancer. Outcome measure: Autism Spectrum Disorder (ASD) and Non-Typical Development (Non-TD) assessed by licensed clinical psychologists using the Autism Diagnostic Observation Schedules (ADOS) and by administration of the Mullen Scales of Early Learning (MSEL).	General public, Pregnant people. Preschool (3-5), Adults (18+). United States; Northern California. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). MARBLES (Markers of Autism Risk in Babies – Learning Early Signs), California, United States, n = 201 (boys = 122, girls = 79). Markers of Autism Risk in Babies – Learning Early Signs (MARBLES). Recruitment: 2006-2014, Follow-up: age 3.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured during each trimester of pregnancy.	Logistic Regression. Confounders adjusted for: pre-pregnancy BMI, year of birth (linear and squared terms), and homeownership.	Lowest exposure concentration for a significant adverse health outcome response: continuous. RRR (95% CI) for the association between MiBP measured in mid-late pregnancy and ASD in children among maternal-infant pairs who took prenatal vitamins: 0.44 (0.21, 0.88). Among mothers who took prenatal vitamins in the first month of pregnancy, there was a significant inverse association between MiBP concentrations in mid-late pregnancy and ASD in children. Associations between MiBP in mid-late pregnancy and ASD in the total study population, among mother-infant pairs who did not take prenatal vitamins, and in analyses stratified by child sex not significant. Associations with non-typical development not significant. No significant associations with MHiBP..	Shin et. al 2018 5043457 High

Continued on next page ...

# Human Health Hazard Epidemiology Extraction

Diisobutyl Phthalate

Metabolite: Mono-isobutyl phthalate (MiBP); Mono-hydroxyisobutyl phthalate (MHiBP)

...continued from previous page

## 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-specific (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

Continued on next page ...

# Human Health Hazard Epidemiology Extraction

Diisobutyl Phthalate

Metabolite: Mono-isobutyl phthalate (MiBP); Mono-hydroxyisobutyl phthalate (MHiBP)

...continued from previous page

## 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



**Human Health Hazard Epidemiology Extraction Table:**

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
TT3/TT4 Ratio	Health Effect: Thyroid- Thyroid function: total tri-iodothyronine (TT3), total thyroxine (TT4), TT3:TT4 ratio, thyroid stimulating hormone (TSH), thyroid peroxidase autoantibodies (TPOAb)-Non-cancer. Outcome measure: Thyroid function markers measured in plasma	Patients in clinics, Pregnant people. Adults (18+). Norway. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women who had a singleton birth and lived close to Oslo (Enrolled n=33050; Used in analysis n=473). Norwegian Mother, Father, and Child Cohort (MoBa). 2004-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during a routine prenatal ultrasound visit.	Generalized linear mixed model. Confounders adjusted for: year, dietary selenium, dietary iodine, parity, depression, season of urine collection, education, age, smoking during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta coefficient (95% CI) for change in TT3/TT4 per IQR increase in MiBP: 0.15 (-0.18, 0.48). Non-significant association between MiBP and the absolute difference in TT3/TT4 levels. The authors also reported similar results from BKMR analyses..	Choi et. al 2021 7978495 Medium
TT3 (ng/dL)	Health Effect: Thyroid- Thyroid function: total tri-iodothyronine (TT3), total thyroxine (TT4), TT3:TT4 ratio, thyroid stimulating hormone (TSH), thyroid peroxidase autoantibodies (TPOAb)-Non-cancer. Outcome measure: Thyroid function markers measured in plasma	Patients in clinics, Pregnant people. Adults (18+). Norway. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women who had a singleton birth and lived close to Oslo (Enrolled n=33050; Used in analysis n=473). Norwegian Mother, Father, and Child Cohort (MoBa). 2004-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during a routine prenatal ultrasound visit.	Generalized linear mixed model. Confounders adjusted for: year, dietary selenium, dietary iodine, parity, depression, season of urine collection, education, age, smoking during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta coefficient (95% CI) for change in TT3 per IQR increase in 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

Continued on next page ...

...continued from previous page

**Human Health Hazard Epidemiology Extraction Table:**

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Absolute difference in TT4 (ug/dL)	Health Effect: Thyroid- Thyroid function: total tri-iodothyronine (TT3), total thyroxine (TT4), TT3:TT4 ratio, thyroid stimulating hormone (TSH), thyroid peroxidase autoantibodies (TPOAb)-Non-cancer. Outcome measure: Thyroid function markers measured in plasma	Patients in clinics, Pregnant people. Adults (18+). Norway. Female. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women who had a singleton birth and lived close to Oslo (Enrolled n=33050; Used in analysis n=473). Norwegian Mother, Father, and Child Cohort (MoBa). 2004-2008.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during a routine prenatal ultrasound visit.	Generalized linear mixed model. Confounders adjusted for: year, dietary selenium, dietary iodine, parity, depression, season of urine collection, education, age, smoking during pregnancy.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Beta coefficient (95% CI) for change in TT4 per IQR increase in MiBP: 0.02 (-0.18, 0.23). Non-significant association between MiBP and the absolute difference in TT4 levels. The authors also reported similar results from BKMR analyses..	Choi et. al 2021 7978495 Medium
Absolute difference in TSH (mU/L)	Health Effect: Thyroid- Thyroid function: total tri-iodothyronine (TT3), total thyroxine (TT4), TT3:TT4 ratio, thyroid stimulating hormone (TSH), thyroid peroxidase autoantibodies (TPOAb)-Non-cancer. Outcome measure: Thyroid function markers measured in 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

Continued on next page ...

...continued from previous page

**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

Continued on next page ...

...continued from previous page

**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, socioeco- nomic ). 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), 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 Moth- ers and Children of Salinas (CHAMACOS). Enrollment: 1999-2000; Follow-up: Up to 2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Un- clear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured during pregnancy.	Regression trees. Con- founders adjusted for: maternal pre-pregnancy BMI, gestational weight gain, diet quality index during pregnancy, smok- ing 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

Continued on next page ...

...continued from previous page

**Human Health Hazard Epidemiology Extraction Table:**

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and QQD*
Overweight and obese patients	Health Effect: Nutritional/Metabolic-Weight change-Non-cancer-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
Estimated additional weight change associated with phthalate biomarker concentrations	Health Effect: Nutritional/Metabolic-Weight change-Non-cancer-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

Continued on next page ...

...continued from previous page

**Human Health Hazard Epidemiology Extraction Table:**

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Language development at 2 years of age	Health Effect: Neurological/Behavioral-Cognitive development, language development, motor development-Non-cancer. Outcome measure: Bayley Scales of Infant Development-Third Edition (Bayley-III)	Pregnant people. Infant (0-1), Toddler (2-3), Adults (18+). Poland; Łódź. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth), Infants (birth through < 12 months), Children (age 1 year through < 11 years). Pregnant women and their children from the Polish Mother and Child Cohort (Enrolled n=148 mother/child pairs). Polish Mother and Child Cohort. 2007; Follow-up at children age 1 and 2.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Unclear Exposure measured at approximately 24 months of age.	Logistic Regression.	Lowest exposure concentration for a significant adverse health outcome response: Continuous. Environment-wide association study (EWAS) conducted using logistic regression: "Language development during the second year of life is strongly associated with 20 parameters, including the child exposure levels to phthalate metabolites... MiBP (MiBPchild)." No quantitative results provided.. Significant positive association between postnatal MiBP metabolite concentrations and language development at age 2..	Sarigiannis et. al 2021 8351761 Low

Continued on next page ...

...continued from previous page

**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

Continued on next page ...

...continued from previous page

**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

Continued on next page ...



...continued from previous page

**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

Continued on next page ...

...continued from previous page

**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 postnataux 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

Continued on next page ...

...continued from previous page

**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
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

Continued on next page ...

...continued from previous page

**Human Health Hazard Epidemiology Extraction Table:**

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Total cholesterol	Health Effect: Cardiovascular-Systolic blood pressure, diastolic blood pressure, total cholesterol, HDL-C, LDL-C-Non-cancer. Outcome measure: Standard enzymatic methods	General public, Pregnant people. Preschool (3-5), Middle childhood (6-11), Adults (18+). Greece; Heraklion, Crete. Female, Male. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years). Mother-child pairs from the Rhea study who became pregnant within one year from February 2007 (Enrolled n=260 mothers and 500 children; Used in analysis n=202). Rhea Study. Within one year beginning February 2007.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Acute (less than 24 hours) Exposure measured concurrently with outcome.	Linear Regression. Confounders adjusted for: child sex, exact age at examination, maternal characteristics (age at delivery, parity, education, pre-pregnancy BMI, smoking in pregnancy).	Lowest exposure concentration for a significant adverse health outcome response: Continuous [geometric mean (SD) child MiBP = 41.1 (3.3) ug/g creatinine]. Beta value (95% CI) for total cholesterol per 10-fold increase child MiBP:-in all participants = 4.4 (0.2, 8.7)-in girls = 7.6 (1.1, 14.6). Significant positive association between 10-fold increase in child MiBP and total cholesterol. Positive, non-significant for girls. p-sex interaction=0.248. No significant findings for other cardiovascular outcomes and child MiBP.	Vafeiadi et. al 2018 5041285 Medium

**Human Health Hazard Epidemiology Extraction Table:**

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
eGFR calculated from serum creatinine; UPCR calculated from urinary protein and creatinine	Health Effect: Renal/Kidney-Estimated glomerular filtration rate (eGFR), urinary protein to creatinine ratio (UPCR),- Non-cancer. Outcome measure: Estimated glomerular filtration rate (eGFR) was calculated using the modified equation formulated by Schwartz and colleagues, and urinary protein to creatinine ratio (UPCR) was measured from the first morning urine samples.	General public. Infant (0-1), Toddler (2-3), Preschool (3-5), Middle childhood (6-11), Teens (12-17). United States. Female, Male. Cross-Sectional. PESS: Lifestage . Lifestage PESS: Children (age 1 year through < 11 years), Adolescents (age 11 years through < 21 years). Chronic Kidney Disease in Children (CKiD) Study: (2005-2008 and 2009-2014), United States, n = 538 children ages 1-17 (boys = 344, girls = 194) years of age). National Health And Nutrition Examination Survey (NHANES). 2005-2008 and 2009-2014.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured in the years of 2007-2008.	Linear Regression. Confounders adjusted for: sex, age at visit, race, ethnicity, glomerular disease, birth weight, low birth weight, prematurity, BMI z-score, use of ACE-I/ARB, SBP and DBP z-scores, urinary creatinine, and urinary cotinine.	Lowest exposure concentration for a significant adverse health outcome response: continuous. Regression coefficient (95% CI) for eGFR: 5.26 (3.76, 6.77)Regression coefficient (95% CI) for UPCR: -28.07 (-36.84, -18.18). MiBP was associated with a significant increase in eGFR after multivariate adjustment (5.26 (3.76, 6.77)), p<0.001 and a significant decrease in the urinary protein to creatinine ratio (-28.07 (-36.84, -18.18)), p<0.001..	Malits et. al 2018 4829246 Medium

# Human Health Hazard Epidemiology Extraction

Diisobutyl Phthalate

Metabolite: Mono-isobutyl phthalate (MiBP); monohydroxyisobutyl phthalate (MHiBP)

## Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Total oocytes	<p>Health Effect: Reproductive/Developmental-Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer.</p> <p>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</p>	<p>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.</p>	<p>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..</p>	<p>Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.</p>	<p>Lowest exposure concentration for a significant adverse health outcome response: T2: 18.0-31.1 <math>\mu\text{g/L}</math>. MiBP adjusted mean (95% CI): T2 vs T1 = 8.7 (7.9, 9.6), p-trend = 0.28.. MiBP had significantly reduced numbers of total oocytes reported for T2. No significant associations with live birth or implantation following assisted reproduction..</p>	<p>Machtinger et. al 2018 5743382 Medium</p>

Continued on next page ...

# Human Health Hazard Epidemiology Extraction

Diisobutyl Phthalate

Metabolite: Mono-isobutyl phthalate (MiBP); monohydroxyisobutyl phthalate (MHiBP)

...continued from previous page

## Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Mature oocytes	<p>Health Effect: Reproductive/Developmental-Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer.</p> <p>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</p>	<p>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.</p>	<p>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..</p>	<p>Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.</p>	<p>Lowest exposure concentration for a significant adverse health outcome response: T2: 18.0-31.1 µg/L. MiBP adjusted mean (95% CI): T2 vs T1 = 6.7 (6.0, 7.5), p-trend = 0.72.. MiBP had significantly reduced numbers of mature oocytes reported for T2.No significant associations with live birth or implantation following assisted reproduction..</p>	<p>Machtinger et. al 2018 5743382 Medium</p>

Continued on next page ...

# Human Health Hazard Epidemiology Extraction

Diisobutyl Phthalate

Metabolite: Mono-isobutyl phthalate (MiBP); monohydroxyisobutyl phthalate (MHiBP)

...continued from previous page

## Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Fertilized oocytes	<p>Health Effect: Reproductive/Developmental-Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer.</p> <p>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</p>	<p>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.</p>	<p>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..</p>	<p>Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.</p>	<p>Lowest exposure concentration for a significant adverse health outcome response: T2: 18.0-31.1 µg/L. MiBP adjusted mean (95% CI): T2 vs T1 = 4.6 (4.0, 5.3), p-trend = 0.48.. MiBP had significantly reduced numbers of fertilized oocytes reported for T2. No significant associations with live birth or implantation following assisted reproduction..</p>	<p>Machtinger et. al 2018 5743382 Medium</p>

Continued on next page ...



# Human Health Hazard Epidemiology Extraction

Diisobutyl Phthalate

Metabolite: Mono-isobutyl phthalate (MiBP); monohydroxyisobutyl phthalate (MHiBP)

...continued from previous page

## Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Top quality embryos	Health Effect: Reproductive/Developmental- Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer. Outcome measure: Top quality embryos were classified as those with 7–8 cells on day 3 (or in cases of day 2 transfer, 4 cells) and < 10% fragmentation.	Pregnant people. Adults (18+). Israel; Sheba Medical Center. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women undergoing in vitro fertilization (IVF) (n = 136) from January 2014 through August 2016 in Israel. 2014-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via spot urine sample; majority of women provided one spot urine samples during ovarian stimulation and/or during the day of oocyte retrieval..	Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.	Lowest exposure concentration for a significant adverse health outcome response: T2: 18.0-31.1 µg/L. MiBP adjusted mean (95% CI): T2 vs T1 = 2.0 (1.7, 2.5)T3 vs T1 = 2.2 (1.8, 2.7), p-trend = 0.08.. MiBP had significantly reduced numbers of top quality embryos reported for T2 and T3.No significant associations with live birth or implantation following assisted reproduction..	Machtinger et. al 2018 5743382 Medium

Continued on next page ...

# Human Health Hazard Epidemiology Extraction

Diisobutyl Phthalate

Metabolite: Mono-isobutyl phthalate (MiBP); monohydroxyisobutyl phthalate (MHiBP)

...continued from previous page

## Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Total oocytes	<p>Health Effect: Reproductive/Developmental- Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer.</p> <p>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</p>	<p>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.</p>	<p>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..</p>	<p>Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.</p>	<p>Lowest exposure concentration for a significant adverse health outcome response: T3: 26.7-148 µg/L. MBP adjusted mean (95% CI): T3 vs T1 = 8.2 (7.4, 9.1), p-trend: &lt;0.001.. MBP had significantly reduced numbers of total oocytes reported for T3. No significant associations with live birth or implantation following assisted reproduction..</p>	<p>Machtinger et. al 2018 5743382 Medium</p>

Continued on next page ...

# Human Health Hazard Epidemiology Extraction

Diisobutyl Phthalate

Metabolite: Mono-isobutyl phthalate (MiBP); monohydroxyisobutyl phthalate (MHiBP)

...continued from previous page

## Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Mature oocytes	<p>Health Effect: Reproductive/Developmental-Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer.</p> <p>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</p>	<p>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.</p>	<p>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..</p>	<p>Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.</p>	<p>Lowest exposure concentration for a significant adverse health outcome response: T3: 26.7-148 µg/L. MBP adjusted mean (95% CI): T3 vs T1 = 6.8 (6.1, 7.6), p-trend = 0.002.. MBP had significantly reduced numbers of mature oocytes reported for T3.No significant associations with live birth or implantation following assisted reproduction..</p>	<p>Machtinger et. al 2018 5743382 Medium</p>

Continued on next page ...

# Human Health Hazard Epidemiology Extraction

Diisobutyl Phthalate

Metabolite: Mono-isobutyl phthalate (MiBP); monohydroxyisobutyl phthalate (MHiBP)

...continued from previous page

## Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Fertilized oocytes	<p>Health Effect: Reproductive/Developmental-Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer.</p> <p>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</p>	<p>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.</p>	<p>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..</p>	<p>Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.</p>	<p>Lowest exposure concentration for a significant adverse health outcome response: T3: 26.7-148 µg/L. MBP adjusted mean (95% CI): T3 vs T1 = 4.5 (3.9, 5.2), p-trend = 0.006.. MBP had significantly reduced numbers of fertilized oocytes reported for T3. No significant associations with live birth or implantation following assisted reproduction..</p>	<p>Machtinger et. al 2018 5743382 Medium</p>

Continued on next page ...

# Human Health Hazard Epidemiology Extraction

Diisobutyl Phthalate

Metabolite: Mono-isobutyl phthalate (MiBP); monohydroxyisobutyl phthalate (MHiBP)

...continued from previous page

## Human Health Hazard Epidemiology Extraction Table:

Author Reported Outcome	Measured Effect/ Endpoints	Study Population	Exposure	Method	Results	Citation, HERO ID, and OQD*
Top quality embryo	Health Effect: Reproductive/Developmental- Total Oocytes, mature oocytes, fertilized oocytes, top quality embryos, live births, implantation-Non-cancer. Outcome measure: Top quality embryos were classified as those with 7–8 cells on day 3 (or in cases of day 2 transfer, 4 cells) and < 10% fragmentation.	Pregnant people. Adults (18+). Israel; Sheba Medical Center. Female. Cohort (Prospective). PESS: Lifestage . Lifestage PESS: Pregnant people (parent) or embryo/fetus (developmental) (conception through birth). Women undergoing in vitro fertilization (IVF) (n = 136) from January 2014 through August 2016 in Israel. 2014-2016.	Biomonitoring Biomonitoring matrix: Urine Exposure Route: Unclear/Uncertain (dust, biomarker without indication of exposure route, etc.) Chronic (more than 28 days) Exposure measured via spot urine sample; majority of women provided one spot urine samples during ovarian stimulation and/or during the day of oocyte retrieval..	Poisson Regression. Confounders adjusted for: maternal age, body mass index, and current smoking status.	Lowest exposure concentration for a significant adverse health outcome response: T2: 12.8-26.6 µg/L. MBP adjusted mean (95% CI): T2 vs T1 = 2.1 (1.7, 2.6)T3 vs T1 = 2.2 (1.8, 2.6), p-trend = 0.07.. MBP had significantly reduced numbers of top quality embryos reported for T3 versus T1.No significant associations with live birth or implantation following assisted reproduction..	Machtinger et. al 2018 5743382 Medium